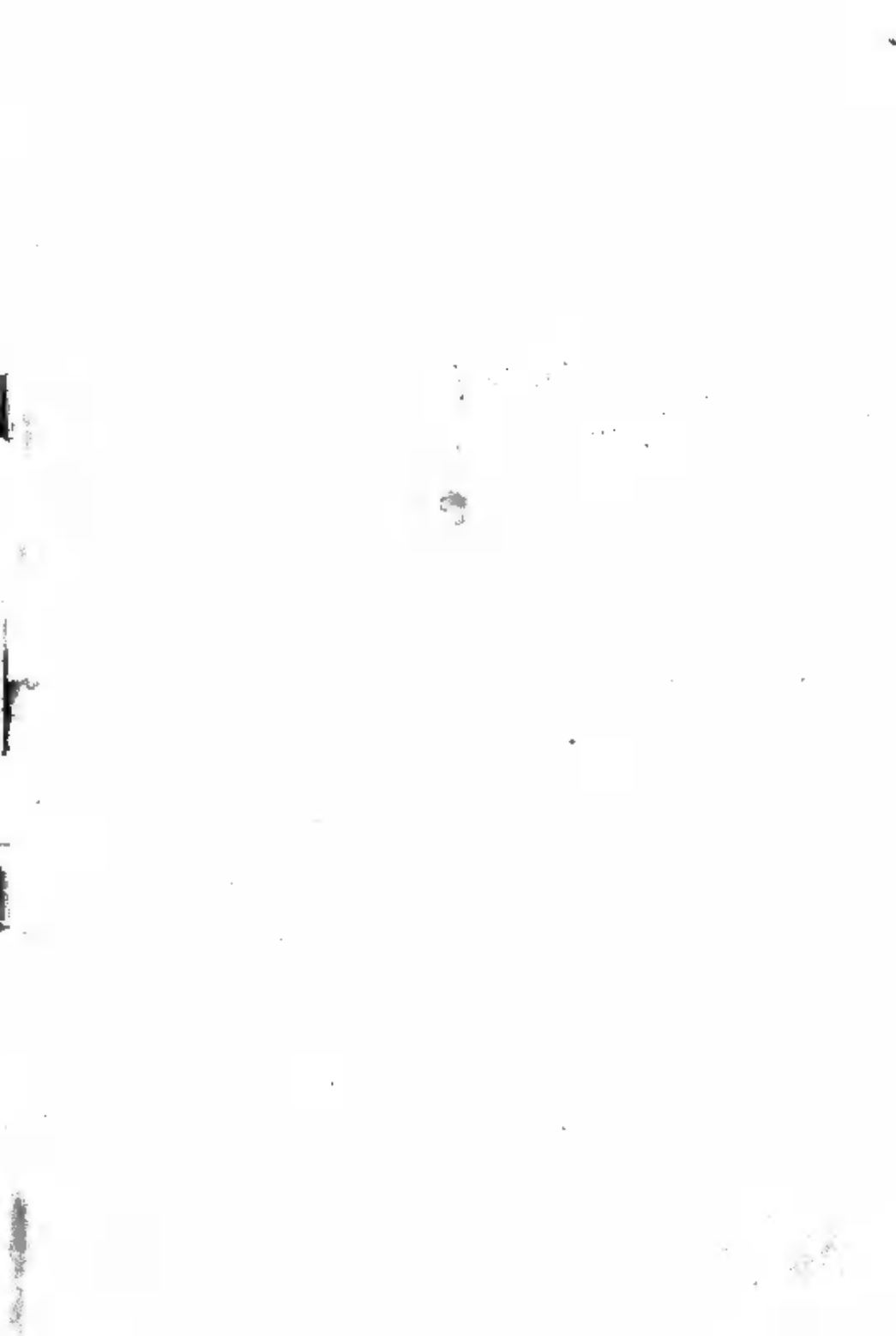


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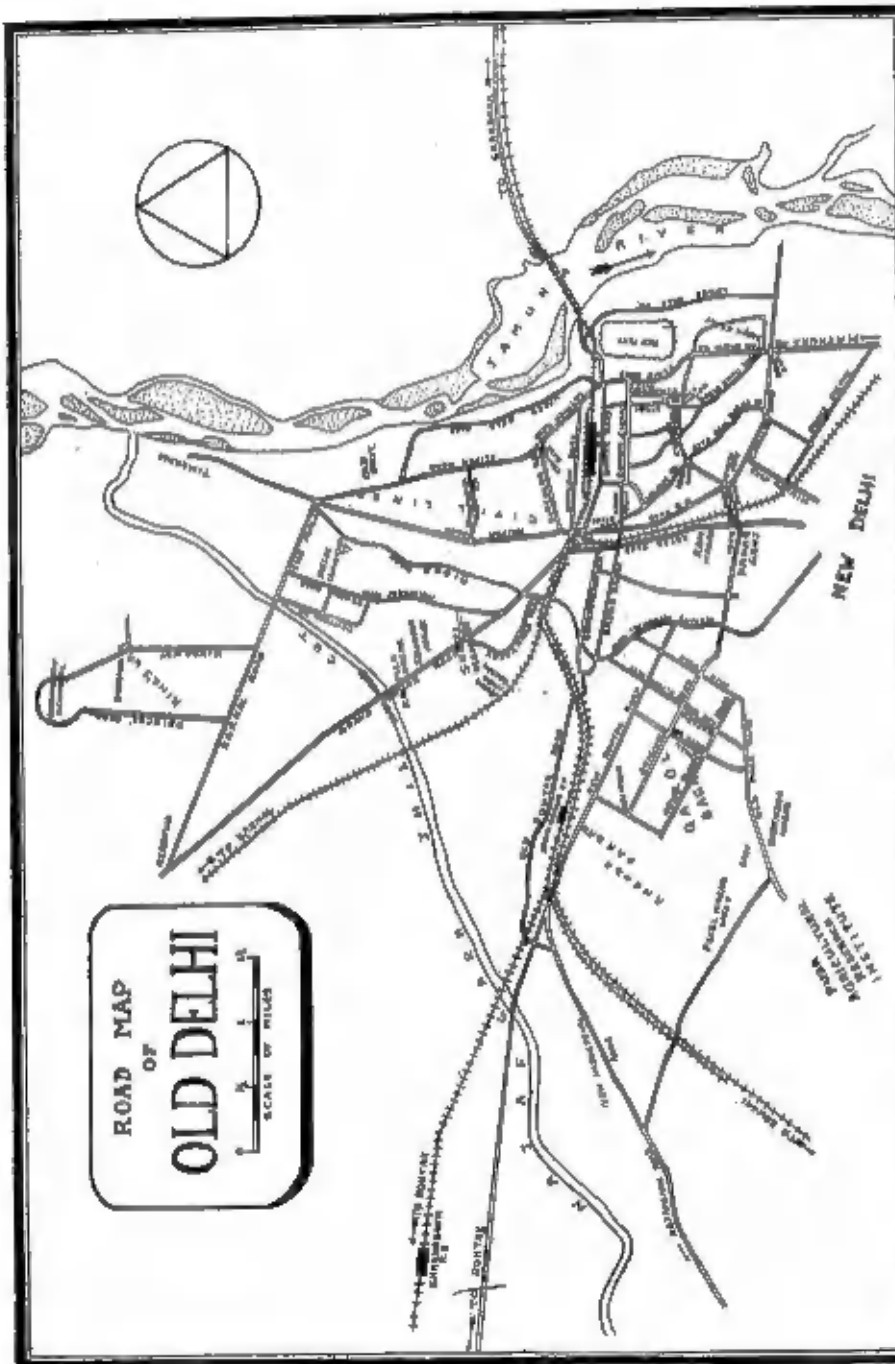
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DELHI
A STUDY IN URBAN SOCIOLOGY



See plate facing last page for Road Map of New Delhi.

UNIVERSITY OF BOMBAY PUBLICATIONS
SOCIOLOGY SERIES, No. 7

DELHI

A STUDY IN URBAN SOCIOLOGY

By

A. BOPEGAMAGE M.A., Ph.D

15045



915.441
Bop

University of Bombay



UNIVERSITY OF BOMBAY
1957

FIRST PUBLISHED 1957

PUBLISHED BY
T. V. CHIDAMBARAN, B.A.,
REGISTRAR,
UNIVERSITY OF BOMBAY,
FORT, BOMBAY,

AND

PRINTED BY
G. S. BYNDOR,
AT THE
JAI GUJERAT PRINTING PRESS,
VICTORIA MILLS COMPOUND,
CAMDEVI, BOMBAY - 7.

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

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ACKNOWLEDGEMENTS

This book is the outcome of field-work done in the city of Delhi and its environs from January to April 1954 and from October 1954 to January 1955. The difficulties that I had to face were immense. There were several occasions when the inhabitants of Delhi came to my assistance and I wish to record my warm appreciation and to extend my sincere thanks to them and also to those many persons who gave the information on which some parts of this study are based.

I would like to record my debt of gratitude to Professor G. S. Ghurye for his constant inspiration, encouragement and guidance in the course of my work. He has put me on the path of critical way of judgment.

This study was made possible by a scholarship awarded by the Government of India in 1953. I am grateful for its kindness. I am thankful to the University of Bombay for publishing this book in their Sociology Series.

Acknowledgements are due to Dr. K. M. Kapadia, the Secretary of the Indian Sociological Society, for permission to reprint, "Indian Ghetto" and "Neighbourhood Relations," which appeared as articles in the journal, *Sociological Bulletin*.

All the illustrations appearing in this book are designed and drawn by me. Base maps for the city have been prepared with the help of the *Imperial Gazetteer of India*, Vol. XXVI, (1931 revised edition) and other road maps available to the public today. All the photographs included here were taken by myself during the course of field investigations.

A. BOPEGANIAGE

Department of Sociology,
University of Bombay,
October 3, 1957.

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In the above we have investigated the matter of concentration from various angles and in each case we have arrived at the conclusion that all future town-building must happen in the spirit of decentralization. Now our investigation of concentration from the point of view of culture, gives that same answer. This is the final and decisive answer, inasmuch as man's cultural problems must be considered the paramount problems of all humanity.

—ELIEL SAARINEN.

Any sort of planning is a criminal folly, if it is not centred on man; if it does not express at every stage the highest aspirations, without any compromise, of man's personality. It must be restricted to the transformation of the environment, and to the administration of things but it must never encroach even upon the periphery of that sphere where men can be governed.

—E. A. GUTKIND.

INTRODUCTION

There is no general recognition in India of the importance of considering how the individual and social needs of people are affected by the physical design of a city. While significant advances have been made in Western countries, very little serious thought has been devoted to a correspondingly wide range of urban problems in India and in practice only a few surveys have been undertaken on these lines. But even they stop short of such vital contemporary problems as the spacing of housing, the provision of community services, the placing of factories and commercial establishments and fail to draw conclusions concerning the rational distribution of land among the various competing users so as to provide maximum satisfaction of the group needs and desires with minimum expenditure of cost or energy.

This work has been undertaken with a view to applying some of the principles of sociological theory to a study of an urban community and making available the kind of factual sociological information that city planners and administrators need in drawing up their blue-prints for redevelopment.

Our approach to this work is from the standpoint of human ecology. Human ecology, to put it in the broadest terms, is the study of the relationships between man and his environment. There are several traditional academic disciplines like geography, economics, biology, demography through which a study of the different aspects of this field can be made and ours is confined only to that discipline which aims at the study of the areal pattern and the development process of a community under varying influences and conditions.

Effective areal planning rests on a knowledge of the processes underlying the areal pattern and the community organization; human ecology deals only with some of these processes.

There are four general aspects of the study of areal patterns and organization in which the human ecologist is interested and they are : the determination of the boundaries that characterise the area, historical influences on the present characteristics of the area, its relationship with outside areas and its internal ecological structure and spatial distribution.¹

In our work, we are mostly concerned with the last aspect of study as it is particularly useful to the city planner and to the administrator. This internal ecological structure and the areal distribution of human phenomena are the results of the operation of ecological processes such as concentration, centralization, segregation, invasion and succession. Space and time are our dimensions in which these processes are observed and measured.

These process concepts can be described as follows. Concentration refers to the tendency of individuals to draw together in a given area or region and centralization is the effect of the tendency of individuals to come together in some area for specific reasons like work, business and other services. Segregation refers to the phenomena exhibited when individuals of similar characteristics become geographically differentiated into different groups. It can be voluntary or involuntary. When a group of men or a new type of business or certain services of one area encroaches on the territory of another the process of invasion is operating; if complete displacement takes place, the result is succession.

The reasons which led us to the choice of the city of Delhi for this study are : first, it is a city split up into two halves—a rare phenomenon in itself—the old and the new; the old, materially decayed but throbbing with urban life and activity; and the new, dreary and designed rather to divide people from each other than to bring them together in community life. Secondly, the old city had come into existence and had evolved without any design whatever in the modern sense of the term; and thirdly, it is a city which has grown extraordinarily rapidly within the lifetime of many of us.

¹ J. A. Quinn, *Human Ecology*, (1950).

Our work is based on the data collected from two sources : first from books, articles and various other publications dealing with Delhi and secondly, from both intensive and extensive field observations. Interviews with people were conducted through the medium of English or of their own mother tongue. In some cases, of course, the help of an interpreter was sought.

While a large number of factors that are involved in a research of this nature were actually studied, not all of them have been either incorporated or discussed in this book. This is an obvious limitation to which the report of any field research work is subject, if it is to be of reasonable proportions. Therefore, in presenting this work, we have focused our attention on only some of the major factors such as history, physical features, population, industry, housing, transport and recreation. All this material has been arranged into eight chapters the last of which contains the conclusion. The first chapter traces the historical growth of the community in time and space. The second one deals with the physical geography of the local area and the region. It discusses the topographical features and climatic conditions which affect the areal structure. The third chapter analyses the distribution and the composition of the population and its movements over a period of time. In the fourth chapter an effort is made to study the occupational structure of the city, its industries and their location and the factors influencing their location. The fifth is a study of housing in the area, the spatial location of different residential types, the factors that have affected their location and the changes occurring at present. In addition, we discuss some of the fundamental influences contributing to the growth of neighbourliness in housing areas and describe a small segregated culture area. The sixth chapter deals with the movement of population; it describes the routes of movement of population within and without and shows how the areas of specialized land use are tied together by routes of communication. It also describes the accumulation of traffic within a specified area at a particular time. In chapter seven there is a description of the recreational facilities and agencies, their location, the available facilities and the actual requirements. The

last one puts forward the conclusion and recommendations emerging from a consideration for the redevelopment of the city.

CONTENTS

				PAGE
				v
				vii
CHAPTER				
I. HISTORICAL BACKGROUND	..	..	..	1
II. PHYSICAL SETTING	..	..	..	18
III. POPULATION	..	..	..	30
IV. INDUSTRIES	..	..	..	48
V. HOUSING	..	..	..	68
VI. TRAFFIC AND TRANSPORT	..	..	..	110
VII. LEISURE AND RECREATION	..	..	..	142
VIII. EPILOGUE : A BLUEPRINT FOR REDEVELOPMENT	..			181
APPENDICES	..	..	..	215
BIBLIOGRAPHY	..	..	..	217
INDEX	..	..	..	227

ILLUSTRATIONS

DRAWINGS

Figure	Page
Road map of Old Delhi	frontispiece
1. Growth of Delhi	facing 16
2. Map of North-west India showing natural regions ..	18
3. Wind directions over Delhi	20
4. Growth of the population of Delhi City	facing 32
5. Metropolitan District of Delhi	37
6. Distribution of population by age and sex	45
7. Location of industries and banks	52
8. Major housing areas	81
9. Daily frequency of omnibus services from Delhi in 1954 ..	130
10. Railroads serving the region	134
11. Distribution of cinemas, public parks, museums etc. ..	176
12. Zonal distribution	facing 184
Road map of New Delhi	facing last page

PHOTOGRAPHS

Plate	Facing page
I. (a) Chandni Chowk—the hub of Delhi	88
(b) Connaught Place—the main retail business centre of New Delhi	89
-II. (a) Shack settlement	87
(b) Houses of displaced persons	87
III. (a) Slums in the backyards of buildings	108
(b) Renovated fronts of old buildings at Chandni Chowk	108
IV. (a) Camels used for riding	109
(b) On the journey to work by bicycle	109
V. (a) Tonga	140
(b) Main street running through Regharpura	140
VI. (a) Roshanara garden with the lake in the centre ..	141
(b) A sports meet	141
VII. (a) Children's playground, Queen's Garden	172
(b) Cinema time in New Delhi	172
VIII. (a) Clock-tower at Subzimandi	173
(b) Workshop and the place of residence	173

CHAPTER I

HISTORICAL BACKGROUND

THE DELHI OF THE PANDAVAS

There is no trace in legend or in archaeology of any settlement at Delhi before the epic period of the *Mahabharata*. Even that great epic has preserved for us only a tradition which speaks of a city called Indraprastha situated on the plains where New Delhi stands today. It was also called Brihasthala or Kandavaprastha. In those days this Indraprastha city was included in the five *prasthas* or plains which belonged to the family of a lunar race called the Pandavas.

Owing to some family foud, King Dhritarashtra, the uncle of the Pandavas, gave away the rights of one half of his family territory called Kurukshetra to his nephews whose father, smitten by a curse, had retired to a hermitage in the Himalayas. That land, south of Dhritarashtra's capital Hastinapur (situated about 60 miles away to the north-east of present Delhi), was thickly forested at that time and was inhabited by a jungle tribe called the Nagas. The five Pandava brothers after driving out the forest tribes and clearing a part of the jungle on a mound of the bank of Jamuna river, founded the city, Indraprastha. The exact site of Indraprastha is not known to us today due to the absence of archaeological evidence but the current belief is that the city of Din Panah—now known as Purana Kila—built by a later King of Delhi on the western bank of the Jamuna occupies the site of Indraprastha.¹

This renowned city of the Pandavas, probably founded in the tenth century B.C., was a well-planned garden city with wide streets well laid out, with towers and palatial buildings, with charming gardens and pleasure houses with lakes full to the brim with crystal clear water.²

The original founders of the city did not stay long. Headed

1 The river Jamuna now flows about a mile from the site.

2 The *Mahabharata* Adi Parva, trans., edited by M. N. Dutt (1895), IX, 27-45.

by the eldest brother King Yudhisthira, the Pandava brothers abandoned it after interpreting the presence of a fly on the food. Yudhisthira was to eat as a bad omen presaging the eclipse of their glory.

After the decay of Indraprastha nothing is known for centuries about a city in this locality. However, there is a popular tradition that before the Macedonian invasions an eponymous King called Raja Dilu or Dhilu, a member of the Mauryan dynasty, founded a city after his name on a site not far away from the enigmatic Iron Pillar standing near Qutab Minar. It lies on the ridge about five miles to the south-west of that ancient city.¹ Perhaps this is the first time that the name Dehli came into use and it is also believed that the present name Delhi or Dilli is derived from the name of King Dhilu.²

After him, the city again fell into oblivion for about 750 years. Neither the Greeks who invaded India from the north-west in the first century B.C. and reached Mathura, nor the Chinese pilgrims who visited India between A.D. 390 and 645 have mentioned any city of that name.³ Ptolemy, the celebrated Egyptian geographer of the second century A.D., has marked in his map of India a spot called *Daidala* close to Indabara (Indraprastha) and midway between Modura (Mathura) and Batan Kaisara (Thaneswara).⁴ Its proximity to Indabara gives ground for belief that it was Delhi, but we have no other evidence to prove it. It must have passed as a small town upto the eleventh century A.D.

THE DELHI OF THE RAJPUTS

In the middle of the eleventh century A.D. a Tumar Rajput

1 There is difference of opinion as regards the site of this Dilli. Some believe that this Dilli was founded on the site of Indraprastha. But there is greater strength in the argument advanced by scholars like Cunningham in favour of this site. See A. Cunningham, *Archaeological Survey of India*, Vol. I, p. 141.

2 There are other explanations too which cannot be accepted. Even now the local inhabitants pronounce it as 'Dilli' or 'Dehli' but not as 'Delhi'.

3 Cunningham tries to identify Pho-Li-Ye-Tha-Lo of Hwan Tshang with Tilaprashta which lay about 10 miles to the S.E. of Qutab Minar. *J.A.S.B.*, Vol. XVII, 1848, p. 24.

4 McCrindle, *Ancient India as described by Ptolemy*, edited by S. M. Sastri (1927), p. 128 and see map facing p. 8 and Cunningham, *op. cit.*

King called Anangpal, forced by the terror of Mohammed of Ghazni, deserted his capital at Kanauj and founded the city of Delhi on the old site of Raja Dilu. He and his successors, Anangpal II and Anangpal III, who reigned for nearly a century, built the walled city of Lal Kot and constructed dams and tanks for the supply of water.

In A.D. 1151 during Anangpal III's reign Visala, a Chohan Rajput King of Ajmere conquered Dilli, but Anangpal, by arranging the marriage of his daughter to the Chohan king's son, ruled in Dilli till his death in the last quarter of the twelfth century when he was succeeded by his son Prithivi Raj, otherwise known as Rai Pithora, who built the well-known citadel and the walled city of Raipithora. Dilli, at this time nearly five miles in circumference,¹ became a border city of the Chohan Kingdom and King Prithivi Raj, well-known for his piety, built twenty-seven Hindu temples in the city on the pattern of the well developed Rajput architecture. His reign was not a long one for at the close of the twelfth century he was defeated at Tewari in a second attack of the Mohammedans under Sultan Mohammed of Ghor and his defeat opened the way for the capture of Dilli. From then on Dilli, "the metropolis of the princely Tomars and the haughty Chohans", was to serve as the capital of Mohammedan empire in India for a long period to come.

THE DELHI OF THE PATHANS

A slave general, Qutab-ud-din Aibek by name, who was appointed as the viceroy of Delhi by the victorious Mohammedan conqueror later became king and founded the Delhi Empire. At first the capital was confined to the old Rajput city, but when it was found that the city of Dilli could not accommodate its growing population, he extended it beyond the old Lal Kot to the plains in the north-east. The twenty-seven temples built by Prithivi Raj were broken down and he built the famous Qu-waat-ul-Islam (Might of Islam) mosque out of their remains. The ruins of this mosque can still be seen near Mehrauli, a town lying about eight miles away to the south-west of New Delhi. He also commenced the building of Qutab Minar, which still stands as a monument of archaeological pride in Delhi today.

1 A. Cunningham, *op. cit.*, p. 183.

This column is 234 feet high with 47 feet 7 inches as the basic diameter. All the buildings of this period bear a mixture of Hindu and Mohammedan architectural features. Altamsh,¹ the successor of Qutab-ud-din added a new quarter to the former's city by extending the south-east side of Lal Kot. After him for nearly half a century the slave dynasty upheld its sovereignty in Delhi.

In A.D. 1290 Jalal-ud-din Khilji founded a new dynasty in Delhi. During the reign of his nephew and successor Ala-ud-din Khilji there were several raids of Mongols on the city. But Ala-ud-din countered the Mongol invasions successfully and put to the sword a colony of Mongols in the city. After the Mongol retreat he had a fort called Siri built at a place about two miles north of Lal Kot and later, he turned it into a city of about a mile circuit; a few furlongs away from it he constructed a capacious tank called Hauz Khaz. It was for the first time in this kingdom that an efficient system of letter-post was developed and further, Ala-ud-din directed his attention to the regulation of prices in the city. He enlarged the Quwaat-ul-Islam mosque built by Qutab-ud-din Aibek and added a gateway known as Alai Darwaza. During Ala-ud-din's reign the city of Delhi was not only the political capital of the kingdom but also became the main commercial and cultural centre. Caravans poured in from every part of the country for business and artists and poets flocked to the court. The poet Hazrat Amir Khuzru and Nizam-ud-din, the saint lived at that time at Delhi. The old Chohan Delhi lying a few miles away also flourished during this period.

The fall of the Khiljis in the first quarter of the fourteenth century ushered in the era of the Tughlak dynasty in Delhi. In order to defend himself from the menace of the Mongols, Ghias-ud-din, its founder, built in A.D. 1321 a new city called Tughlakabad on a rocky outcrop of hills about five miles to the south-east of the Chohan city. This city had a circumference of about four miles; but unfortunately it lacked the most indispensable commodity for the existence of human life, that is water. And so, it was never fully occupied. A greater part of the population preferred to remain in the old city where wells and tanks

1 Qutab-ud-din Aibek and Altamsh belonged to a Turk dynasty.

provided an ample water supply. Within a few years of its commencement it was abandoned completely and it is a current belief that the curse put upon the city by the Saint Nizam-ud-din to have been a strong factor in its abandonment. Workmen employed in constructing a tank near Humayun's tomb were recruited for labour on the King's fortress at Tughlakabad. The saint, offended at this, cursed the new city: "May it remain deserted or may it be a habitation for Gujars and jackals." Ever since then the place has remained a deserted tract infested with jackals.

After the death of the founder of Tughlakabad in A.D. 1325, his son Mohammed-bin-Tughlak who was mentally unbalanced, succeeded him. During this time the city was again threatened by attacks from the Mongols and he twice attempted to remove the city with its entire population from Delhi to Daulatabad in the Deccan, 800 miles away. In one instance in A.D. 1327, the businessmen in Delhi, disapproving of the change of capital which would ruin their trade, threw insulting letters into the Durbar Hall and this so enraged the king that he ordered the whole population of Delhi to be removed to Daulatabad. At this exhibition of their king's cruelty every person left the city, leaving behind furniture and possessions. When the city had been completely deserted for some time, he wrote to the inhabitants of other cities asking them to move to Delhi but even then the city was not fully repopulated.¹

The second occasion was when a famine broke out in Delhi, and, in order to save the population, he ordered the inhabitants to stay in the prosperous Sargadwari in ancient Khort. After a stay of six years there, the king returned to old Chohan Delhi again and began to extend it. He built a wall to enclose all the suburbs that had sprung up between Chohan Delhi and Siri and in the centre constructed palaces and mosques. The new city was named Jahanpanah. At this time its total area extended from Qutab Minar for about four miles to the north-east. On the north-western border of the city lay the well-known

1 *Yah base Gujar*

Yah rahe ujar.

2 Ibn Battuta, *Travels in Asia and Africa 1325-1354*, trans. by H.A.R. Gibb (1929), pp. 204-205; Yahya Bin Ahmad Bin Abdullah Sirhindi. *The Tarikh-Mubarakshahi*, translation pp. 104, 108.

pleasure tank Hauz Khaz and on the east, covering about two square miles, was another large and beautiful reservoir from which the inhabitants of the city drew water and in the centre of which was a beautiful two-storeyed pavilion.

In A.D. 1354, Mohammed Tughlak's nephew Firoz Shah, who succeeded to the throne of the Delhi Empire, abandoned the old Dilli near Qutab Minar and built a new city called Firozabad at a site near the ancient Pandava city, Indraprastha. This change of site of capital indicates a desire on the part of the founder of the new city to leave the hot stony soil of the former sites and settle on the alluvial soil on the banks of the river where, in addition, the climate is cooler, the average rainfall is higher¹ and the water supply perennial. (See Appendix I).

Firozabad occupied all the ground from old Indraprastha to the ridge including the site of Shahajahanabad which came into existence later. It was an open city without a wall round it and the shape was more or less a half hexagon with the base facing the river. Its suburbs joined the suburbs of the old city which was in existence side by side with the new one. It contained eight mosques, three palaces, a hunting box, numerous large buildings and about sixty rest houses. Firoz Shah founded a magnificent university for the study of Arabic near the Hauz Khaz tank. The forest area on the ridge was reserved for hunting. For the purposes both of irrigating the land and of transporting goods, he opened up the Jamuna canal with a branch to Delhi. For some time both the cities, Firozabad and old Dilli near Qutab Minar, flourished together.

Before long, Timur the Lame, a Tartar, occupied Delhi for a period of two weeks only but he left the two cities in a state of desolation and the next two dynasties, Sayyids and Lodis removed their capital to Agra. With the change of capital the splendour and grandeur of Delhi as a great city faded away and for nearly a century and a quarter it fell to the rank of a provincial town.

THE DELHI OF THE MOGULS

In A.D. 1526 the arrival of Baber ushered in the Mogul

¹ The annual rainfall is about six to seven inches higher near the riverine areas than in the hot hilly part where stood the old cities.

rule in Delhi. During his reign Delhi regained its lost glory. The city again became not only the political capital but also the commercial and cultural centre of the Empire. Artists rubbed shoulders in the streets with merchants and soldiers. The city had fifty-two bazaars and thirty-six mandlis. Between A.D. 1530 and A.D. 1540 Baber's son Humayun reoccupied the old site of Indraprastha, rebuilt it under the name Din Panah (Protector of the Faith). Within a few years he was expelled by Sher Shah who founded his city under the name of Shurgarh on the site of Firozabad and Indraprastha. It was nine miles in circumference and extended from the neighbourhood of the site now occupied by Humayun's tomb to the site where now the new Cricket ground near Delhi Gate is situated. He built a fortress known as Salimgarh, on a spot near the present Jauuna bridge to guard the ford over the river by which people used to cross from the eastern side. Fourteen years later the expelled King Humayun reoccupied it; but after his death for nearly a century Delhi once more sank to the level of a provincial town. Akbar and his son Jahangir, from A.D. 1556 to A.D. 1627, resided in Agra and Lahore respectively neglecting the city completely. It was given as an estate to Sayyad Kamal, the son of a Bokhara noble.

After Jahangir's death in A.D. 1627, his eldest son Khurram succeeded to the throne assuming the title of Shahajahan and transferred his capital from Agra to Delhi. Shahajahan, a great city planner amongst the Moguls, built the magnificent city of Shahajahanabad with wide streets and parks. A long-forgotten prosperity began to smile on Delhi again. This Imperial city of Shahajahan occupied the territory by the river to the north of the Indraprastha of the Pandavas. Around it, he built a wall having a circumference of about four miles. Today, the old Municipal Town of Delhi occupies this site. Outside the walls its suburbs spread towards old Indraprastha and the people who dwelt in the old cities near Qutab Minar migrated not only to Shahajahanabad but also to its suburbs so that the population rose to about one and a half lakhs. On the eastern side of the city not far from the river, Shahajahan built a citadel, now called the Red Fort, and in the heart of the city overlooking the citadel he also constructed the imposing and still surviving structure

of the Jama Masjid. This was one of the most common features that the cities of Middle East bore. It is built of red sandstone and white marble and is about 200 feet in length and 120 feet in breadth. Two minarets, each 130 feet high, flank the central dome which is 201 feet high. During the same time Red Jaina Temple standing at present at the entrance to Chandni Chowk was built by a group of Jains. Several well-known gardens were laid out in different parts of the city. One was the Begum Bagh, named after the ruler's eldest daughter Jahanara Begum, which today is known as the Queen's Garden. Another was the Roshanara Garden, named after another daughter Roshanara Begum, which lies near Subzimandi; and is still known by that name. The other two were the Hajat Baksh Bagh (Life-giving Garden) in the citadel and the Shalimar Bagh, now a wilderness beyond Subzimandi to the north. During the time of Shahajahan there were European artists and craftsmen working on his buildings and it was they who introduced the florentine or *pietra dura* style of mosaic which also superseded the older styles. Business in the city began to flourish and travellers from far and wide came to the city having heard of the splendour of the court and of the magnificent monuments built in marble and stone.

In A.D. 1658 the Great Mogul was deposed by his son Aurangzeb but the city did not lose its strength and glory. Indeed, the beauty of the older cities was eclipsed by the grandeur and the size of the new one. Round Aurangzeb's citadel, the same citadel that had served his father, ran a deep ditch and adjoining this was a spacious garden that spread a dazzling profusion of plants and flowers beneath the towering red walls. Today nothing remains of this garden except a green lawn. Next to the garden was a royal square on one side of which was a bazaar crowded with petty traders, astrologers and jugglers. Apart from the network of small streets which ran hither and thither through the city there were three main thoroughfares radiating from the citadel: one was the well-known Chandni Chowk,¹ the second was a road to Jama Masjid and the

1 At that time the section of the road to the west of the present Police Station was called the Chandni Chowk proper. The eastern section upto Red Fort was called the Urdu or Military bazar. The name Chandni Chowk was extended later to the whole street.

third led to the Delhi Gate. The original Chandni Chowk remains still the main bazaar street of Old Delhi, but the other roads only partly survived. The road to Jama Masjid and its bazaar were destroyed after the mutiny in 1857 and the present Faiz Bazar Road in Daryaganj is a part of the road which ran to Delhi Gate.

The principal thoroughfare, Chandni Chowk—"Moonlight Street"—was very spacious and a canal which was directed into the citadel ran through it but this was closed after the capture of the city by the British. On either side of this great avenue ran arcades of one-storeyed shops. To their front were the warehouses and at the back were the residences of traders. This sort of practice continues to this day. Nobles, officers of justice and rich merchants, too, lived in this locality. The buildings in the narrow lanes running off Chandni Chowk housed the common troopers, clerks and servants of the court.

Some of the buildings of the city were built of bricks and their flat roofs served as terraces but many were built of clay and straw. The larger ones were airy, commodious and often well furnished; many of the nobles' houses had shady courtyards and gardens with small *jets d'eau* at the entrance. The smaller houses were thatched cottages and on account of congestion these were destroyed wholesale from time to time by fire.

About half a mile to the west of Chandni Chowk were the fruit and meat markets, but these markets were shifted later to Subzimandi. Regular supplies of dry fruits like almond, walnut, and also fresh apples and grapes came from Bokhara, Persia and Samarkhand, mangoes came from Bengal and Goa. Water-melons grew in the neighbourhood of Delhi itself. People in the city were able to get fresh mutton, pigeons and partridges and fish caught in the Jamuna.¹ There were no liquor shops as the sale of strong drink was prohibited by Mohammedan law. There were a few bakeries here and there. At every important festival there was a fair, patronised by the sovereign, where the nobles and others were able to obtain rich brocades and embroidery, turbans and fine muslins. Marriage contracts and

¹ F. Bernier, *Travels in the Mogul Empire*, 1658-68 (1891), pp. 230, 251, 252.

betrothal of boys and girls of nobles were arranged in these fairs.¹

Trade flourished in the city and the caravans streamed into the city bringing in merchandize from distant lands. The population rose to nearly two lakhs and the suburbs spread as far as Firozabad in the south although, except for a few nobles of the court, it was mostly the poor people who inhabited the old cities near Qutab Minar. During this period A.D. 1714-17, the representatives of the East India Company led by John Surman laid the foundation of the British Dominion in India.

The peaceful atmosphere in the city of that time did not last long. Insecurity and chaos soon prevailed. The Maratha army raided it in the middle of A.D. 1737 and two years later the Persians under Nadir Shah entered it and indulged in widespread pillage and massacre for fifty-eight horrifying days. An eye-witness wrote: "On the morning of 11th an order went forth from the Persian Emperor for the slaughter of the inhabitants. The result may be imagined; one moment seemed to have sufficed for the universal destruction. The *Chandni Chowk*, the fruit market, the *Dariba Bazar* and the buildings around the *Masjid-i-Jama* were set fire to and reduced to ashes. The inhabitants, one and all, were slaughtered.... The Persians laid violent hands on everything and everybody; cloth, jewels, dishes of gold and silver, were acceptable spoil.... The town was reduced to ashes and had the appearance of a plain consumed by fire." Such was the devastation brought to Delhi by the Persians and they left it with a booty estimated at seven hundred crores of rupees.

"The ruins in which its beautiful streets and buildings were now involved was such that the labour of years could alone restore the town to its former state of grandeur" wrote the same eye-witness in another place. But this was not the end of destruction. Between A.D. 1757-61 a civil war broke out between two rival ministers, one residing at Shahajahanabad and the other at Humayun's Delhi, Din Panah. This was followed by the invasions of the Afghans and again of the Marathas. Besides

¹ *Ibid.*, p. 272.

² H. M. Elliot, *The History of India as told by Its Own Historians*, (1877), Vol. VIII, pp. 88, 89.

that in 1782 the failure of rain brought one of the severest famines since the time of Mohammed Tughlak. Nearly two-thirds of the population perished without any means of obtaining relief and most of the villages in the suburbs of the city were depopulated. At this time there was yet another invasion of the Marathas. They marched in and secured a hold upon the city making the Mogul King a cypher of the Maratha leader. Fifteen years later, in 1803, the British defeated the Marathas and took the city under their protection.

THE DELHI OF THE BRITISH

A year after its capture by the British there was the threat of a further attack on the city again by the Maratha General Holkar. As a result, the broken walls of Shahajahanabad were repaired and squared bastions and detached martello towers were added. Holkar was defeated and the city with the neighbouring territory was placed under the charge of an officer designated as Resident and Chief Commissioner of Delhi. In 1819 the District of Delhi was constituted including two Parganas of the north and south with the city as the centre.

In 1832 the office of Resident and Chief Commissioner was abolished and the affairs of the Delhi territory were directed to be administered by a Commissioner under the Government of the North-West Provinces (present Uttar Pradesh). The powers exercised by the Resident as Chief Commissioner were now vested in the Board of Revenue and the High Court at Agra.

When the city passed into the hands of the British its population was sparse and came to no more than half of its earlier maximum. The Delhi near Indraprastha was no more a city but a suburb with dilapidated thatched houses. The other cities near Qutab Minar became a country town where nobles retired for sport. The well-planned parks and lakes of the Moguls were things of the past. The suburbs of Shahajahanabad spread to the west and north-west towards modern Paharganj and Subzimandi respectively. The original inhabitants of the city lived in these areas. As there was insecurity in the countryside the British established themselves first within the city walls in the area we now call Kashmeri Gate. They occupied the vacant palaces

and gardens along the river; after a few years new houses also were erected. Soon there were signs of greater security outside, and as the number of Europeans also increased, they started building houses beyond the Kashmeri Gate in the north; some of those are still to be found. This area was called the Civil Lines. In the space between the present Alipore Road and Rajpur Road were the houses of the Officers. The biggest structure called Ludlow Castle was for sometime the residence of the Commissioner; a few furlongs to the east on the bank of the Jamuna lay the well-known Metcalfe House built by Sir Thomas Metcalfe in 1830. In Daryaganj the area between the Red Fort and the present Delhi Gate became the quarter of ordinary European clerks and businessmen, the Officers having moved to Civil Lines. Their cantonment lay in the plains to the north of the ridge where we find the University today.

Delhi bearing as it did such deep scars of war, was yet a booming commercial centre. Chandni Chowk became the centre of fashion and the hub of the city. Buildings on model lines sprang up in the north. Social and cultural activities began again in the city under a placid atmosphere. Clubs were opened in the European quarters where there were facilities for sport and recreation of all kinds, including ball-room dancing. These were a pleasant surprise for the inhabitants of the city among whom the womenfolk observed purdah.

Suddenly in the middle of 1857 the rebellious sepoys of Meerut entered the city and took it by storm. The whole life of the city came to a standstill for three long months. Mob violence ruled everywhere. Eventually, after a siege and bombardment, the British recaptured the city and put it under martial law with a military governor in control. Shortly afterwards the inhabitants of the city were expelled on account of the murder of certain European soldiers. Although this expulsion order was subsequently modified, only the Hindus were allowed to return. Because of this act the population, which numbered about a lakh and sixty thousand in 1847, diminished by over twenty thousand.

In January 1858, the city was handed over to the civil authorities and a month later was transferred from the jurisdiction of the North-West Provinces to that of the Punjab. In the same

year responsibility for the government of India was transferred from the East India Company to the British Crown and the Governor-General, known as the Viceroy, became the sole representative of the Crown in India and was responsible for the entire administration of British India.

After this transfer of power the face of the city began to change. In 1859, the citadel of Shahajahan was turned into military barracks for a detachment of British infantry and a company of artillery. Since then it has been known as the Fort of Delhi. In order to give the guns an unrestricted line of fire many buildings and streets, in one of the most thickly populated areas outside the Fort—on the high ground between Elgin Road and Jama Masjid, were swept away. Even some mosques were demolished. Today a wide open lawn occupies this space.

The most important development in Delhi in the latter half of the nineteenth century was the coming of the railway. In 1867 the first line from Calcutta entered Delhi and in the same year, Sind and Punjab railway too entered the city. In 1873 the Rajputana State Railway connected Delhi with Bombay and in 1891 Delhi-Umballa-Kalka line gave a shorter route to the northern States and Provinces. By the opening of the Southern Punjab Railway in 1897 the distance from Karachi to Delhi was shortened. In 1900 the opening of the Ghaziabad-Moradabad railway linked Delhi with places like Oudh and Rohilkand in the east. In 1905 the Agra-Delhi line provided a shorter link with Bombay on a broad gauge. Similarly during the same period metalled roads were built connecting Delhi with other cities. Even before the mutiny, in 1852 the Grand Trunk Road from Calcutta was extended right up to Chandni Chowk. A few years later the roads from Delhi to Meerut and Kernal were also extended.

The linking of the city by railways and metalled roads with other parts of India had a tremendous effect on its development. The new speedy and cheap means of transporting raw materials immensely helped the growth of industries. Moreover, it facilitated the transport of goods for buying and selling. Modern mills and factory industries sprang up in the north-west along the Grand Trunk Road to Punjab. Three foundries and

engineering works on a modern scale were established for the first time between 1870 and 1888. In 1889 two cotton spinning and weaving mills were installed, and Delhi soon became one of the biggest and most flourishing commercial centres in northern India and entered also into the movement of modern industry.

Before the turn of the century the physical outline of the city had undergone many a change. Its suburbs had extended upto a distance of two miles along the bank of the Jamuna in the north and on the south-west and on the north-west there were the suburbs of Paharganj and Subzimandi. Away to the south lay the ancient ruins. The lofty wall of three and a quarter miles in length was still there, but out of the fourteen gates which existed during the last days of Mogul Kings, now there were only a few left, the others having been blocked up. The principal ones were: Kashmeri Gate on the north side; Lahori Gate on the west; Ajmeri Gate on the south-west and Delhi Gate on the south. The former Imperial palace, now a military fort, lay to the east. The railway from Calcutta entered the city by a bridge over the Jamuna from the east and passed to the railway station within the walls. The other railway lines entered from a point near Lahori Gate on the west. Within the walls there were about ten important thoroughfares, all drained, well metalled and lighted. The Chandni Chowk was still the principal thoroughfare. A double row of trees ran down throughout the greater part of its length. About half-way down there was a clock tower which collapsed in 1951. The canal which ran through its centre to Shahajahan's citadel had been closed down. The railway station lay about two furlongs to its north and the Jama Masjid about two furlongs away to the south.

In the space between Kashmeri Gate and the Fort there were a large number of public offices, a big Church, the Delhi College and the Metropolitan Hotel. The open space between the Fort and Daryaganj was turned into a public garden. Daryaganj was still occupied by the European residents, some of whom also lived in the Cantonment. All that area between Chandni Chowk and the city wall in the south-west was densely occupied by shops and the dwellings of inhabitants.

During the same period there were changes in the city administration too. In 1883, by a Punjab Government notification under the Municipal Act, the Delhi Municipality was created to look after public health and convenience. It became a first-class municipality in 1881, and by the beginning of the twentieth century Delhi City Municipality consisted of the old city of Shahajahanabad including suburbs such as Qarol Bagh, Subzi-mandi, Sadar Bazar, Paharganj and Basti Regharpura and covered an area of about five and a half square miles. The area north of the city, where the European population lived and where the Viceregal Lodge and Secretariat were located before New Delhi came into existence, was placed under the administration of a Notified Area Committee formed in 1913. Under the new administration the city changed apace. Modern civic amenities such as public water supply and electricity were introduced, the sanitary conditions were improved and a few parks were laid out. The total area under the administration of the two bodies at the time covered about thirteen square miles and the total population rose to two lakhs.

In the year 1911, because of the central position that Delhi occupied in addition to its glorious historical associations, the British Government announced the transfer of the capital of the Indian Empire from Calcutta to Delhi¹, and in the following year by a proclamation of the Governor-General-in-Council, the Central Government took over Delhi district under its direct management. The affairs were conducted through the medium of an officer whose title was "Chief Commissioner." In 1915, another territory comprising sixty-five villages from the United Provinces was included in the Delhi district. After an interval of about a century and a half Delhi once again became the political capital of the Indian Empire, this time under the British.

¹ I cannot subscribe to the view of Arnold Toynbee that the change of capital of India from Calcutta to Delhi illustrated the operation of (his) 'law' governing the location of capitals. Nor do I support his view that Bengal had to pay the penalty because of the lack of stimulus, vitality and originality. The British found that the location of Delhi on the dividing line between the Muslim dominating areas in the North-West and the Hindu areas in the south and east was ideal to pursue their policy of divide and rule. (See A. J. Toynbee, *A Study of History*, (1934), Vol. II, pp. 132-133 and (1954), Vol. VII, pp. 193-195).

For the centre of the Imperial Government a piece of land between Purana Kila and the Ridge in the south-west of the city was chosen. It had natural drainage and was free from floods. According to the Delhi Town Planning Committee's report: "...no doubt can exist as to the superior healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site." This "invasion" of land ousted a large number of rural inhabitants in the areas lying to the south-west of Old Delhi.

The development of industries stimulated by the opening up of communications and the shifting of the capital of India to Delhi accelerated the rapid growth of the city. A large number of villages nearby got absorbed in its expansion. The factories drew men from the country and the Central Government Office jobs attracted many white-collar workers and unemployed men from other cities.

During the first two decades of the century ending in 1921 the population of the city increased by fifty per cent while the total area covered by New Delhi of the British under Municipal and Cantonment administration was forty-eight square miles approximately.

Until the buildings for the new capital were completed the members of Government, mostly Europeans, took temporary accommodation in the former Civil Lines area. Simultaneously there grew up clubs and hotels under European management to cater for the needs of visitors. For the transaction of business a number of foreign exchange banks were opened along Chandni Chowk in Old Delhi.

The new city, planned by Sir Edwin Lutyens and Sir Herbert Baker, rose after eighteen years' labour of 29,000 men into a city of gardens and excellent roads. It cost the country's exchequer fifteen crores of rupees. It was built to accommodate a population of little more than half a lakh. In the heart of the city, not far away from Old Delhi, lay New Delhi's retail business centre, namely Connaught Place. Several wide streets radiated from there in different directions through the new city.

1 Second Report of the Delhi Town Planning Committee, Medical Report, (1913) p. 3.

A mile and a half away to its south-west lay the Government Offices. The area between was used for constructing houses for officials and clerks interspersed here and there with bungalows built after a simplified form of Palladian classic styles. A few miles away to its west lay the cantonment.

THE DELHI OF FREE INDIANS

The Second Great War in the 1940's drew in a large population to the city. They were military men, civilians and traders. In addition, there grew up several industries to produce essential war requirements. In 1947, just two years after the end of the war, the partition of India brought in an influx of more than four lakhs of displaced persons from West Pakistan, while about a lakh and a half left the city for West Pakistan. All round the city several colonies were opened to house the refugees and half a dozen satellite towns grew up and in recent years new hotels, government blocks, private houses and buildings of all kinds have sprung up though there has been no major change in the pattern of the city.

CHAPTER II

PHYSICAL SETTING

Delhi City lies in lat. $28^{\circ} 38' N.$, and long. $77^{\circ} 13' E.$, and more or less in a line with the ancient cities of Cairo and Canton. The mean elevation of the area occupied is upwards of seven hundred feet above the sea level. It is about 980 miles by railway from Bombay, 950 miles from Calcutta and 940 miles from Karachi.

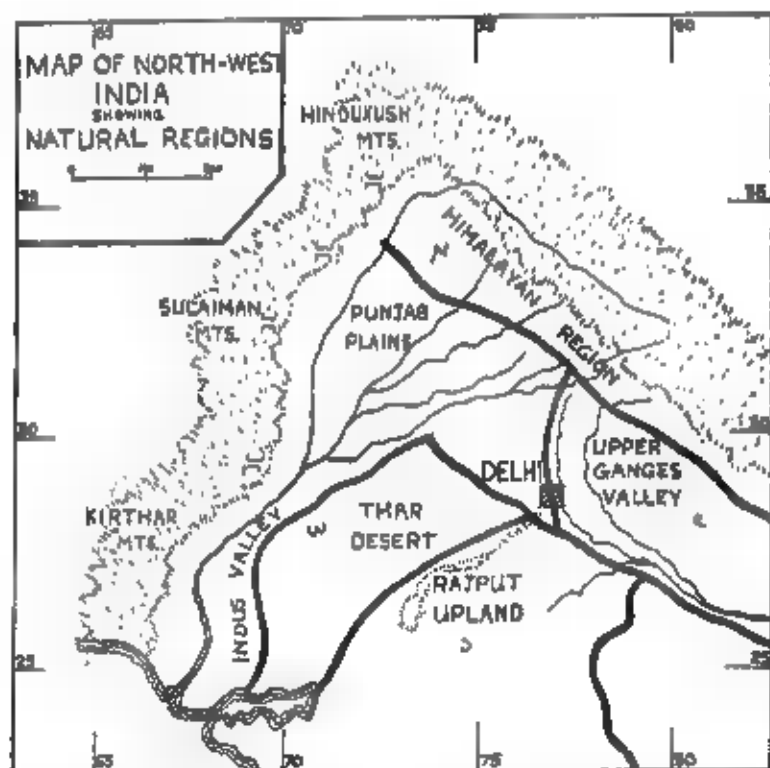


Figure 2*

* This map does not in any way refer to the political boundaries of India and Pakistan. It shows only the N.W. region before partition.

In a physical map of India it will be seen that Delhi occupies a position in a narrow strip of plain land lying between two distinct physical features of the earth: (1) on the north the lofty mountain wall of the Himalayas and (2) on the west the great Indian desert. The northern mountain wall mentioned first has a tremendous influence on the physiography of the upper regions of India including Delhi. On the one hand, it keeps out the severe cold winds which blow from the Central Asia and Tibet during winter, and on the other, it captures the moisture-laden winds blowing from the southern seas and brings heavy rains during the monsoon. Again, the rivers flowing from these mountains are constantly fed by the waters of the melting snow and rain. In contrast with these favourable conditions the desert on the west makes the winds hot and dry.

The most notable physical features we find in the narrow plain are: (1) the river Jamuna which, with its roots buried in the Himalayas, enters the plain from the north and flows towards the south and (2) the prolongation of the spur of the Aravalli Hills of Rajputana terminating at an angle on the western bank of the river Jamuna. It is in the space of this triangle—flanked on one side by the ridge and on the other by the river with the rocky land between Okhla and Mehrauli at its base—that the various cities of Delhi grew and fell. The land between the river and the ridge beyond the village Tughlakabad gradually opens into the fertile open plains of the Indo-Gangetic Valley. The founders of the city seemed to have chosen this site purely for strategic reasons: fundamentally, to defend the fertile plains of the east and the south from the oncoming forces of foreign invaders from the north-west.

The ridge and the river is mentioned here in order to show how they have affected the physical features of the city. The Aravalli Range of Rajputana extending upto Delhi was a prominent feature in the old Palaeozoic and Mesozoic geology of India, performing all the functions of a great mountain chain contributing their sediments to many deposits of later ages.¹ Today, due to a repeated cycle of erosion, we find only deeply-eroded remnants spreading out to the north. It is one of these branches that spreads into Delhi. It enters Delhi from Gurgaon on the

1 D. M. Wadia, *Geology of India*, (1939).

south-west and expands into a rocky tableland and divides itself into two branches at a point near Mehrauli, ten miles to the south of the present city. One runs in a north-eastern course and the other spreads out to the east. The north-easterly one narrows down and passes the city from the west and terminates at the river Jamuna near the village called Wazirabad. The ridge in some places attain a height of about 860 feet above sea level. A break of the ridge occurs at the junction of the two suburban areas of the city, viz. Subzimandi and Sadar Bazar. It is from this break of the hill that the lines of communication to the north and north-west run out. In some parts the ridge has thrown out branches and the valleys lying between them have turned out to be very suitable land for living space. One such area is Qarol Bagh situated between the Anand Parbath and the Jandawala ridge.

The next important feature is the river Jamuna. It enters the Delhi district from the north and flows down to the south passing the city from the east. It has a broad valley which is annually subjected to inundation. The land to the west of the river, the site of Delhi, is on a higher level than the land stretching on the eastern banks and hence the city is safe from floods. But further up in the north beyond the village Wazirabad, the land on the west is as low as that on the eastern banks and during floods all that area too gets submerged in water. The low land on the eastern side of the river stretches in some places upto a distance of about three miles.

The width of the river near the city is about half a mile. The water level during about four months of the year subsides very low and it can be forded very easily. Sandy patches get exposed here and there during these months. In the monsoon season, when the rains start in the north and also the snows of Himalayas begin melting, the water level rises up flooding all the low-lying areas on the eastern side of the river. Usmanpur, Biharipur, Palla, Sungarpur, Bakhtapur are villages which get submerged every year. It is said that in 1947 the floods of the river spread upto Shahadara town, a distance of about four miles.

GEOLOGY

The greater part of the city and environs lie on the alluvium; but the ridge which runs across it consists of Alwar quartzite belonging to the Delhi system of the transition group of peninsular India. It is of micaceous and ferruginous character. The well-known Makrana marbles—the source of the material for the buildings constructed by the celebrated Mogul kings of Delhi—are a product of this series of rocks. Even today, these rocks on the ridge are used for house construction. Quarries to dig up this rock have been opened up on the ridge at Jandawala, Mochi Bagh and Chandrawal. Over the rocky bed in the ridge lies a thick layer of loose loam.

Fine clay which is good for the manufacture of bricks is found in the tracts round about the city. Kaolin is found in large deposits in the villages of Mahipalpur and Kusumpur near Mehrauli. The presence of these deposits have given rise to the pottery industry in the south of Delhi in a village called Usuf Serai.

Chalk and salt-petre are found in small quantities. River sand is found in plenty along the Jamuna banks.

FLORA AND FAUNA

The general vegetation found in Delhi is that of the drier part of Upper Gangetic Plains. As the rainfall is low, below 40 inches, no ever-green forests in this part of the country can be expected. Xerophytic type of thorny bushes are found on the ridge. During the rainy season a carpet of greenery lies spread over the ridge dotted here and there with wild flowers in full bloom. Some of the common plants found are the *kikar* (*Acacia arabica*), *karil* (*Caparis aphylla*) and also small wild berry trees. The ridge between Jandawala and Kitchner Road looks beautiful during many months of the year. No big trees are found on the ridge. A tall grass called *jhund* and *gandar* also grow on the slopes of the ridge. *Jhund* is used for thatching by the poorer class of people living in the city, and the roots of the *gandar* are used for making Kaskar screens. They are used as air-coolers in houses.

In the dry plains of the south-west flora is very meagre, and big shady trees can be seen growing scantily. *Kikar* is also

a very common plant in the plains of the south. Other common trees are the sub-tropical species like the *neem*, *jaman*, mango, *farash*. *Neem* and pipal trees are found mainly along the roads. They provide ample shade.

The land to the north-west of Roshanara Garden is partly forest and big trees also grow there. Along the low-lying areas in the north the *tamarish* shrub grows extensively. The *dhak* plant is also found in some parts. Cactus too grows there.

The green land rolling from the new industrial area upto Najafgarh town is a pleasing sight to the eye. Unfortunately, this beauty of the land surrounding the city is destroyed by the smoky funnels of the brick kilns and the houses constructed along the roads.

The bushy ridge and the land surrounding the small town called Mehrauli are infested with jackals. Their hootings can be heard at night, one group answering to the call of the other. In some places along the bank of Jamuna hogs are found, and the inhabitants who have lived in the city suburbs for generations speak of leopards living in the thick bushes but a short time ago. Antelopes, however, are an extinct species. Monkeys are not uncommon. Sometimes they jump into the houses of those who live along the ridge and carry away household utensils and other light articles. That universal pest crow and also the *mynah* are found everywhere. The trees along Chandni Chowk are full of *mynahs* and the crows come to roost in trees along Market Road, Safdarganj Road as also elsewhere. Vultures hover in large numbers in the sky. Wild pigeons and parrots are found in the bushes on the ridge and also in trees in New Delhi.

The river Jamuna abounds in fish. The common fish found are the *goonch* (*Bagarius yavelli*), *rahu* (*Labeo rohita*), *mahaseer* (*Barbus tor*), *kalbons* (*Labeo kalbasu*), *theila*, *singhari*, and *chilwa*.

CLIMATE

The climate of a locality is determined by the altitude, rainfall, temperature and direction and velocity of winds and its proximity to the sea. In one of the earlier sections we have pointed out its altitude and distance from the sea. Here we

shall be describing Delhi's rainfall, temperature and wind directions.

Rainfall

Monsoonal winds bring rain to Delhi. There are two such monsoonal currents blowing over the area. They are the south-west monsoon and the north-east monsoon currents. The south-west monsoon current is more active over the area than the north-east one. It brings moderate to heavy rains over Delhi from June to September.

TABLE I
AVERAGE RAINFALL BASED ON OBSERVATION
FROM 1881 TO 1940

Month	Mean monthly total (Inches)	Mean No. of rainy days
January	0.99	2.0
February	0.83	1.7
March	0.51	1.3
April	0.33	0.8
May	0.52	1.8
June	3.03	4.2
July	7.03	9.0
August	7.28	9.0
September	4.84	4.8
October	0.40	0.8
November	0.10	0.3
December	0.43	0.9
Annual mean	26.24	38.1
Number of years	60	60

Source : *Climatological Tables of Observation in India*, Government of India, Delhi (1953).

The figures in table I showing the average monthly rainfall for sixty years, indicate that the highest rainfall occurs during the months from June to September. Eighty four per cent of the total annual rainfall occurs during these months. They are the wettest months in Delhi. These rains cool down the hot desert winds blowing over the area. The lowest rainfall occurs gene-

rally during the months from October to December when the monsoons are in a transition period. In this period the sky remains very clear, and cool northerly winds blow over the city. The weather becomes pleasant.

The north-east monsoon current bringing dry winds from Central Asia passes over Delhi and cause light rain. It begins in January and lasts till the end of April. About ten per cent of the total annual rainfall occurs during this period. This rainfall is very important for Kharif crops like wheat grown in the locality.

If we compare the average rainfall in Delhi with that in Mehrauli, the satellite township lying in the midst of the old cities of Delhi, we find a considerable difference between the two. The average in Mehrauli is 19" while in Delhi it is about 26" (see Appendix I).

Delhi gets rain for about 36 days of the year.

Temperature

In northern India climatic conditions vary widely from place to place. In the eastern side beyond the tropic of cancer it is hot in summer and mild in winter with lot of moisture in the air. But in the western part the summer is very hot and the winter is very cold with very little moisture in the air. The conditions at Delhi are typically those of the western part.

Table II gives the mean temperature, daily maximum and minimum temperatures observed over sixty years from 1881 to 1940.

It will be seen that the annual maximum mean temperature is 88.8°F. and the minimum 64.5°. The mean daily maximum temperature goes to 105° in May, the hottest month of the year and minimum is only 79° during the same month. The coldest month of the year is January when the daily maximum is only 70.5° F. and minimum 43°F. In some years the temperature shoots above 110°F. in May and June and falls down to 40°F. in January.

During the months of May and June a dry hot wind, locally known as 'loo', blows over the area in day-time. However, the nights become very cool and pleasant. Dust storms of local origin occur over Delhi during the changing period from winter

TABLE II
AIR TEMPERATURE (TAKEN AT 8 HOURS)

Month	Mean of		Mean of	
	Daily maximum F°	Daily minimum F°	Highest in the month F°	Lowest in the month F°
January	70.5	43.3	77.4	40.5
February	74.7	49.2	83.5	43.3
March	85.0	57.1	96.6	51.1
April	98.6	67.7	106.1	62.4
May	104.8	78.8	111.9	70.1
June	102.4	82.5	112.0	73.5
July	95.3	80.1	105.0	74.7
August	93.0	78.4	98.8	75.0
September	93.5	75.5	98.6	71.3
October	92.5	64.3	96.6	59.5
November	83.2	51.8	88.8	48.8
December	73.7	45.0	79.4	42.0
Annual mean	82.8	61.5	112.8	35.2

to summer. They blow over the city covering every nook and corner and blinding for some time the people staying outside.

Humidity

The percentage relative humidity for the months of the year are : January, 68; February, 71; March, 55; April, 40; May, 39; June, 56; July, 77; August, 80; September, 74; October, 58; November, 53; and December, 67. The annual mean is 61 per cent.

These figures show that the highest percentage of relative humidity is found in the months of July and August and the lowest in April and May.

Wind

Table III given below summarises the percentage number of days on which wind blew at Delhi.

TABLE III
WIND DIRECTIONS

Direction	N	NE	E	SE	S	SW	W	NW	Calm
Annual total									
mean.....	4	4	7	13	8	5	32	17	15

It will be seen that in about 49 per cent of days the wind blows either from west or north-west. These winds are hot and dry as they blow from the desert. The cold and dry wind from north and north-east blows only during eight per cent of the total number of days. Percentage of calm days is comparatively low.

WIND DIRECTIONS OVER DELHI

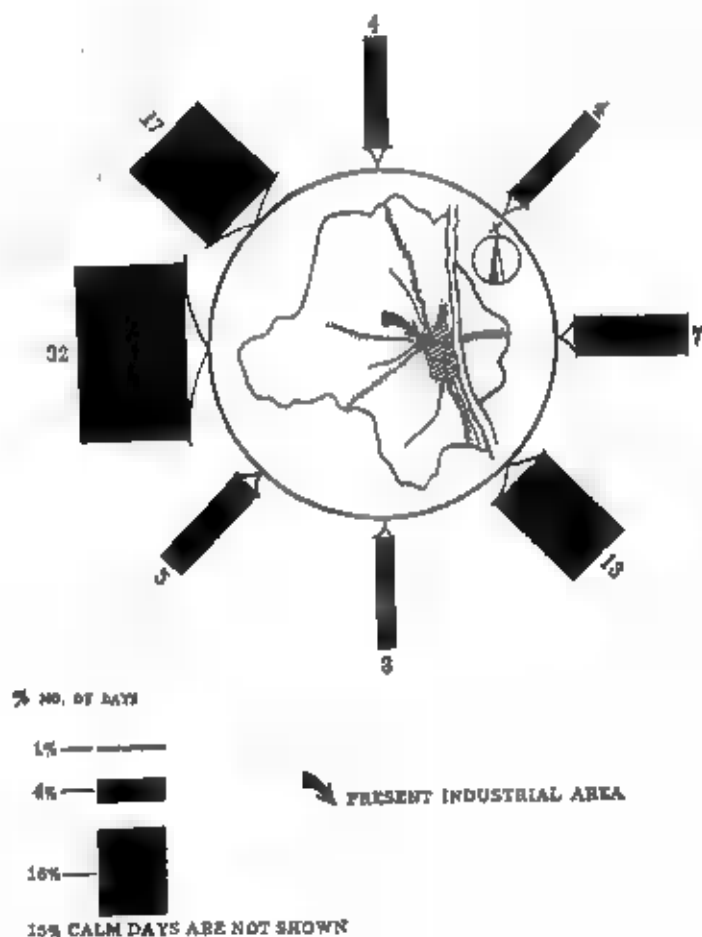


Figure 3

Delhi has the advantage of a fine natural site with the magnificent background of the ridge on one side and the beautiful river on the other. The high rocky ridge stands as a land barrier to separate the moderately populated extension areas from the congested parts of the city. In some places the ridge is used for water reservoirs to supply water to the city situated at its foot. The gradual sloping of the land from the ridge towards the river in a south-easterly direction has an important effect upon the natural drainage, water-supply and sewage disposal.

The quartzite rock on the ridge is very useful for the manufacture of stone-ware because of its micaceous and ferruginous character. Kaolin present in the area can be used as a principal raw material of refractory industries and the fine clay for brick manufacture.

There is an old saying in Delhi that three things go to make a city. They are : *daria*, *budal*, *badshah*, that is, a river, rain bringing clouds and an emperor. Delhi exemplifies the truth of this saying. River Jamuna is a two-fold blessing to Delhi where the rainfall is very low. On one hand, its snow and rain-fed water irrigates a large area of land, and on the other, it is the only perennial source of water supply to the city. Spring water is not common in Delhi. Several pumping stations are found along the river. The water is pumped into the reservoirs at the ridge before it is distributed in different parts.

The Jamuna river also supplies a high percentage of city's supply of fish. Fish is a favourite dish of the Bengalis and also of the Muslims living in the city. The fish which are sold in the market are *goonch*, *rahu* and some other varieties as indicated in an earlier section. The local consumption of fish is estimated at 150 maunds a day, but the Jamuna fish supply is insufficient to meet this demand. Hence a large amount of fish has to be imported into the city from Punjab, U.P. and Calcutta.

The Jamuna river is not, however, an unmixed blessing. Annually the low-lying areas on the eastern banks of the river go under water when it is in spate and causes lot of damage to the property of people occupying some parts of these areas. This annual inundation of the river and the shifting of its course have checked the physical expansion of the city.

The low lying land on the eastern banks stretching for about four miles is grassy and provides good pasture for cattle and sheep. Moreover, these lands have opened up opportunities for people to run dairies and supply a large amount of milk to the city. In addition, the lands supply enough fodder too for horses and cattle in the city. This fodder is generally sold at markets in Paharganj, Subzimandi and also in Siddipura. The soil in some parts of the river bank is good for groundnut cultivation.

It was stated earlier that the greater part of the city and environs lie on alluvium. This alluvial soil is best suited for agriculture. Nevertheless, Delhi has turned to be a deficit area today and has to depend mostly for her food from Punjab and United Provinces. Delhi city environs can produce only fifteen per cent of the total requirement of food supply.¹

The alluvial soil in Delhi is dry, porous and sandy and it is fitted for the cultivation of crops that require little moisture about the root of plants. Two kinds of crops are raised. They are the Kharif and the Rabi crops. The principal Rabi crops are wheat, barley, and pulses like gram and oil seeds. In the lands to the north and west of the city, barley, gram and wheat are grown extensively. During the winter season barley fields can be seen stretching for miles and miles. Sometimes barley is grown along with castor oil plants. Gram is generally grown on the undulating lands in the south. It is often cultivated in combination with wheat which is grown extensively everywhere. The quantity of rice grown is very small.

The chief Kharif crops are maize, millets and cotton. Many of them are short season crops and are grown in June-July and harvested in October-November months.

Chillies are grown in the northern parts of the city round about Narela town. Melon and other vegetables are grown extensively along the river in lands where Jamuna flood-water deposits the fertile soil. Some orchards too are found in the land irrigated by the Western Jamuna Canal.

House-gardening is not at all common in Delhi. Where there is such gardening, it is to be found either in the suburbs or in

¹ Delhi State Government, *Quarterly Digest of Economics and Statistics*, Vol. I, 1952.

New Delhi which has enough space for such a purpose. That too is mostly practised by those in higher-income groups. Rocky earth, shortage of water and lack of space are some of the factors which hinder good gardening.

CHAPTER III

POPULATION

THE METROPOLITAN CITY OF DELHI

In the earlier chapters we outlined the history and the geographical setting of Delhi and here we turn to study the population distribution of the metropolitan city.

In the year 1911 and the decades previous to that, the Census of India shows only one Delhi city consisting of the areas under the Old Delhi Municipality, the Civil Lines and the Cantonment. But after the transfer of the seat of Imperial Government to Delhi, the Census of India for 1931 shows two cities : Old Delhi and New Delhi or Imperial Delhi. The Old Delhi City consists of the areas under the Old Delhi Municipality, Civil Lines, the Fort Notified Area Committee and Shahadara and the areas under the New Delhi Municipality and the New Cantonment are included in the New Delhi City. The 1951 Census of India also includes three more satellite towns, viz. Mehrauli, Najafgarh and Narela and terms them, along with others, Urban Areas. Though the cities have been and still are separated to function under different local bodies, it can be said that all of them except Shahadara and the satellite towns form more or less a compact unit.

For the purpose of our study, we define the Metropolitan City of Delhi as that composite unit comprising the two cities, Old Delhi and New Delhi with the areas under the following local bodies included in them : (i) Old Delhi City (Shahajahanabad) including the Delhi City Municipality, Civil Lines, Fort Notified Area Committee, West Notified Area Committee and Shahadara Municipality¹ and (ii) New Delhi City including New Delhi Municipality and New Cantonment. The approximate area and the population in each local body according to Census of India 1951 is given in Table V. The boundary lines of the metropoli-

¹ Shahadara town, though lying on the eastern suburb, is hardly cut off from the main city; and a large number of people employed in the city proper reside there.

tan city of our study will be placed at points along main roads where built-up land has given way to open countryside. These landmarks are : Tilak Nagar along Najafgarh Road on the north-west, Palam Aerodrome on the west, Yusuf Serai village along Delhi-Mehrauli Road on the south-west, Okhala village along Mathura Road on the south, Shahadara town on the east, Wazirabad village on the north and Azadpur village on the north-west. When the points are joined, the metropolitan city area takes a pear shape.

The satellite townships, such as Mehrauli, Najafgarh and Narela, are separated from the built-up area of the metropolitan city by several miles of green land and will be included when speaking of the Metropolitan District of Delhi. These three townships are connected by good motorable roads and come under the area of influence of the metropolitan city as their marketing and trading centre. Each township contains a population of between 5,000 and 10,000 and their civic affairs are looked after by Notified Area Committees. Mehrauli lies to the south-west of Delhi, Narela to the north-west and Najafgarh to the west.

GENESIS OF POPULATION

During the pre-British period, the population of the city was highly mobile in character. For the city did not then boast of any important commercial or industrial development. It was only a political and cultural centre with the king as its head, and when he lost his power the city lost all its importance and a new one arose at the next political centre. Furthermore, at that time the population consisted mostly of the courtiers, the nobles and the troops of the king and when he left it for a stay of a long period elsewhere or transferred his capital, all of them followed. With them went their families and servants too. The merchants, too, had to accompany them as in their absence the brisk business in the city would reduce to nil. Bernier, the noted traveller commenting on the condition of the city, states: "The whole population of Delhi, the capital city, is in fact collected in the camp because deriving its employment and maintenance from the court and army, it has no alternative but to follow them."

After the establishment of the British rule in Upper India it became a thriving commercial centre; and with the improvement in unsettled conditions and the introduction of better civic amenities there began a stable growth in its population.

There was no proper census of the population of the city taken before the advent of the British. The figures for those periods were worked out on the exaggerated descriptions given by different travellers who visited Delhi time and again.

At the time when the city passed into the British hands—that is, in 1803—Delhi city did not contain more than 150,000 inhabitants. During the next forty years, there was a very slow growth in the population. In 1847, the population of the city with the suburbs was only 160,279, showing an increase of about 8.5 per cent. But the figures in the decade ending in 1868 show a decrease of the population by about 3.7 per cent. This can be due to the absence of some of the people who were expelled from the city after the Mutiny in 1857 (see Chapter I). It took some time for repopulation. In the seventies of the nineteenth century, after the introduction of railways, an increase of about 12 per cent is shown.

In the years just before the beginning of the nineteenth century a few factories were opened on the north-western area of the city. Although this attracted the labourers from the villages and also from the contiguous provinces, it did not give definite proof of a thriving industrial centre. As the city was far away from the places of raw material, the transportation of such goods remained costly and some mills had to be closed down. Hence in 1901 the population of the city shows a slow increase of 8 per cent only. Even in the decade ending in 1911 the figures indicate a slow growth. The growth of 12 per cent in that decade was, to some extent, due to the presence of hundreds of persons who had come from the provinces to make preparations for the Imperial Durbar. On the other hand, a plague which occurred during the decade carried away many.

The real growth of the population in the city began only after it was declared the Imperial Capital of India in 1911. By that time, the industrial and commercial conditions also had improved, and from then onwards a steady increase of migrants flowed into the city. The pull exerted by the new city was very

GROWTH OF THE POPULATION OF DELHI CITY

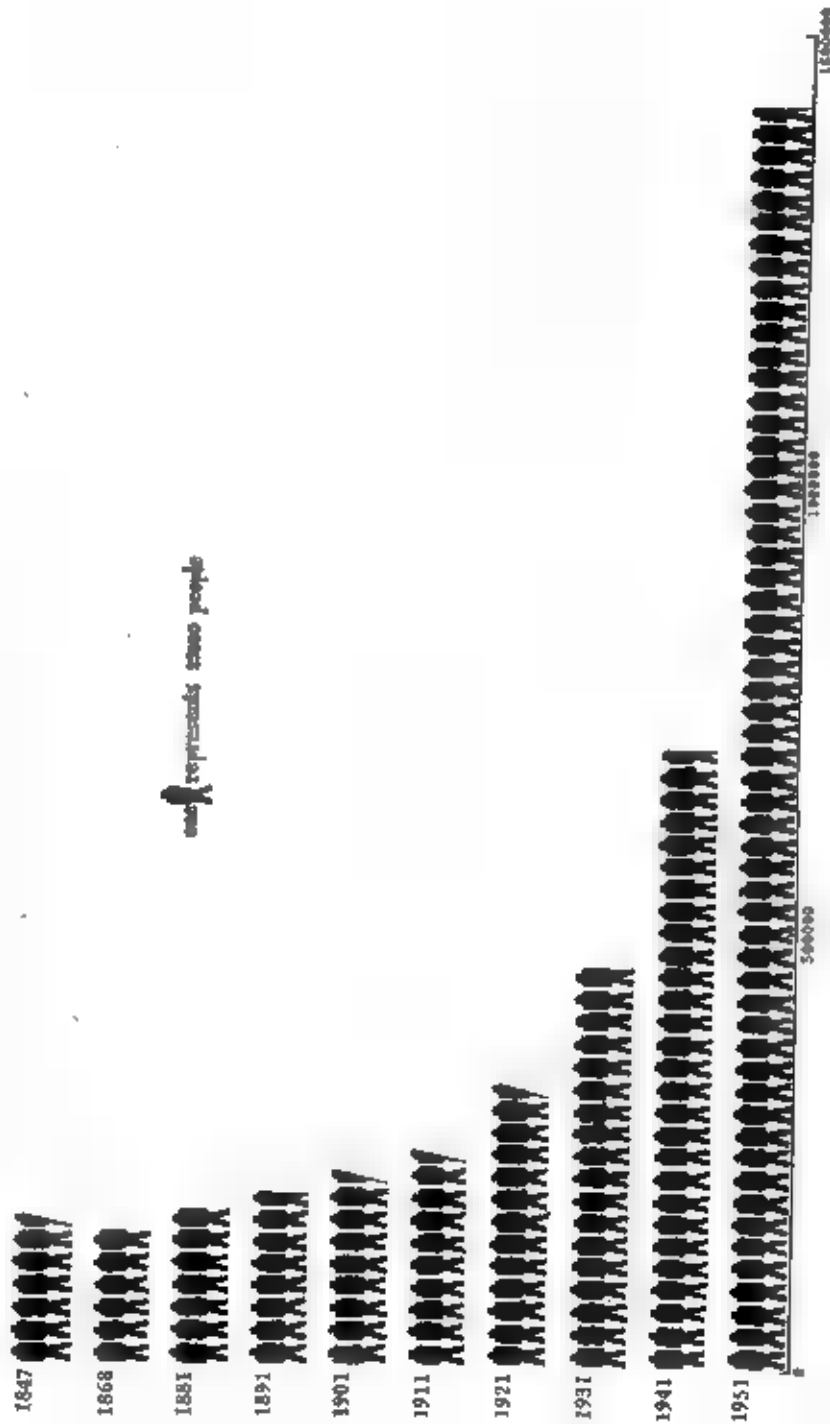


Figure 4

strong. It needed the services of thousands of labourers; and they came in large numbers from the neighbouring areas. In addition, there came in businessmen and also the Imperial Government officials who were stationed in the former capital in Calcutta.¹ The immigrant population in 1921 consisted of 45 per cent of the total. Though there was a definite possibility of an

TABLE IV
DECENNIAL GROWTH OF POPULATION IN THE
METROPOLITAN CITY OF DELHI

Year	Population	Increase(+) or decrease (-)
1847	160,270	..
1868	154,417	-3.7
1881	173,393	+12
1891	192,579	+11
1901	208,575	+8
1911	232,837	+12
1921	304,420	+31
1931	447,442	+47
1941	695,886	+55.57
1951 a	1,414,855	+108.4

Total increase of population from 1847 to 1951 is 795%.

a This figure excludes the population of the satellite towns of the metropolitan district which the Census has termed, Urban Areas.

increase, a violent influenza epidemic which swept over Delhi, brought it down. At this time the city comprised the Old Delhi City (that is, Shahajahanabad) and the New Delhi City or Raisina. The whole area under different local bodies covered 65 square miles approximately.

From 1921 onwards, as the city regained its importance politically, commercially and industrially, more and more immigrants flowed in. During the decade ending in 1931 the population marked a gradual increase of 47 per cent, 48 per cent of the

1 After the shifting of the capital to New Delhi there grew up a seasonally mobile section in the population. Majority of them were the employees of the Government of India who proceeded to Simla during the summer and returned during the winter. This practice has now stopped.

total population being immigrants. The same decade marked a slight movement of population towards Qarol Bagh in the western part where the land was good for habitation. In the north-west it was extending beyond Subzimandi. The Shahadara village on the east also grew up into a township of 8,000 people, a high percentage of them depending on the city for employment.

During the decade ending in 1941 the growth was gradual. Even with a large number of immigrants included in it, the increase was only 5.5 per cent. The phenomenal growth of population took place only in the decennial period ending in 1951. During this period the improvement of sanitation and health conditions brought down the mean decennial death-rate from 26.5 in 1931 to 12.6 and furthermore, there was a great excess of immigrants over emigrants. The partition of India in 1947 brought in a sudden wave of about four and a half lakhs of displaced persons to Delhi overshadowing those immigrants who had come from individual provinces for trade or for jobs. Almost overnight the city's population increased by 103.4 per cent. This sudden influx of immigrants brought pressure on the living space of the city proper. Some took accommodation in the abandoned houses, some settled down in the suburbs and some in the satellite towns.

Rank of Delhi

From a point of population size, Delhi occupies a very important place amongst the larger cities in India. Calcutta and Bombay since 1891 have been competing with each other to occupy the first place in the rank. During the same period Madras and Hyderabad have always been occupying the third and the fourth places respectively. Delhi from 1891 onwards has been keeping on a very steady rise towards a higher rank. In 1891 it occupied the eighth place among the fifteen major cities of India, in 1911 the sixth place, in 1931 the sixth place and today it occupies the fifth place.¹ If New Delhi's population which has risen above the two-lakh mark is taken into account, this will raise it to the fourth place (see Appendix II).

¹ *Census of India, 1941, Vol. I, Part I, pp. 76-83 and 1951, Paper 1, pp. 24-25; and Kingsley Davis, The Population of India and Pakistan, (1951), pp. 131-132.*

POPULATION AND DENSITY OF THE METROPOLITAN CITY

The population figures and the density of each area under local bodies for the years 1931 and 1951 are shown in Table V. An examination of the figures reveals that the density of the highest degree occurs in the commercial centre of the Metropolitan City, i.e., within the area of Old Delhi Municipality. The density in this area has risen up by an alarming rate from 58,312 in 1931 to 132,555 per square mile in 1951, thus showing an increase of 128 per cent. To accommodate this additional population the Metropolitan City responded by expanding over one square mile only. This density, the highest amongst the major cities of India, is caused by the stay of a large number of displaced persons from West Pakistan and also by its flourishing trade. The figures given will make a little stronger impression when we compare its density with those of the two biggest cities in India, Calcutta and Bombay. In 1951, the municipality area of the Calcutta city, even after absorbing about four lakhs of displaced persons from East Pakistan, shows only 88,953 persons per square mile. The figure for Bombay city is 92,056 persons only.

The other areas of the city too show a rapid increase in their population density during the course of the last two decades. Among them the density of the New Delhi Municipality and also that of the West Delhi Notified Area Committee area which came into existence during the course of last five years stand prominent. This is mainly due to the bulk of displaced persons and white-collar workers residing there.

In a commuter's zone four miles away lies Shahadara where the density rose from 6,120 to 10,267 persons per square mile. With the improvement of trade and transport the density of the townships like Mehrauli, Najafgarh and Narela also increased.

Population Density in Old Delhi

Precise statistics to study the net density of different wards or constituencies falling under various local bodies in the Metropolitan City for 1951 are not available except for Old Delhi Mu-

TABLE V
POPULATION AND DENSITY

Name of Local Body	Approximate area in miles	Population		Density per sq. mile	
		1931	1951	1931	1951
Old Delhi City Municipality.....	6.80	347,539	914,832	58,312	132,555
Delhi Civil Lines (N.A.C.).....	8.86	16,347	83,273	1,845	9,399
Fort (N.A.C.)....	0.96	1,641	10,022	1,709	10,440
West Delhi, (N.A.C.).....	3.45	...	58,862	...	17,061
Shahadara Municipality.....	3.00(a)	8,262	30,862	6,120	10,267
New Delhi City Municipality....	32.82	64,855	276,314	2,044	8,419
New Delhi Cantonment....	16.59	5,798	40,950	530	2,468
Total for Metropolitan City	72.58(b)	447,442	1,414,355	6,835(c)	19,493
Mehrauli.....	0.50	...	7,436	...	14,872
Narela.....	1.50	...	9,597	...	6,398
Najafgarh.....	1.00	...	5,088	...	5,088
Total for Urban Areas in the Metropolitan District	75.58	...	1,438,976	...	19,013

a Round figures are given for Shahadara Municipality.

b This is the approximate area of the Metropolitan City. ■ is 1.5 square miles less than the figures given by the Census of India, 1951.

c Divided the 1931 population by 65.46 square miles which was the area of the city at that time.

The area of each local body in 1931 was : Delhi Municipality 5.96; Delhi Civil Lines, 8.86; Fort (N.A.C.) .96; New Delhi Municipality, 31.37; New Delhi Cantonment, 16.59 and Shahadara 1.35 square miles.

nicipality. Therefore the data for Old Delhi Municipality will be studied here separately. Table VI gives an analysis of our findings.

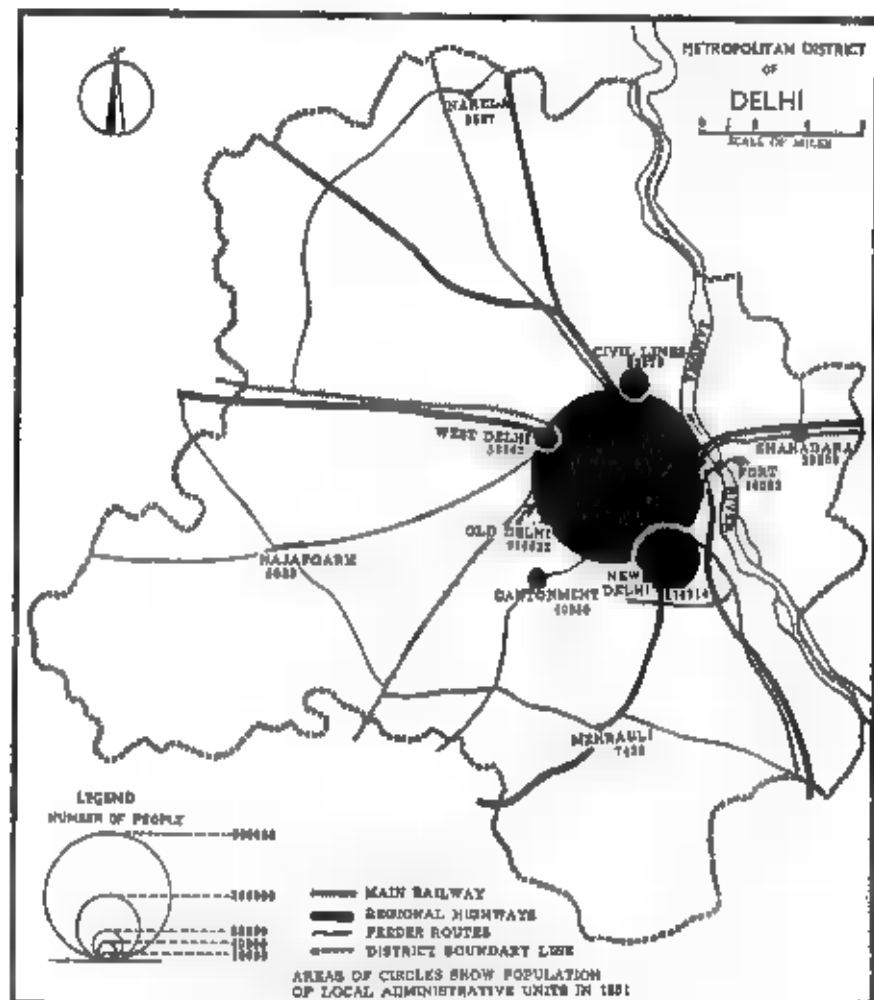


Figure 5

TABLE VI
AREA, POPULATION AND DENSITY OF OLD DELHI
MUNICIPAL CONSTITUENCIES, 1951

Name of Constituency 1	Total area 2	Built-up area 3	Population 4	Gross density 5	Net density 6
1. Kashmeri Gate....	270.8	67.5	20,181	74	299
2. Mori Gate.....	51.6	46.5	23,390	453	503
3. Chandni Chowk....	98.8	56.3	15,103	152	268
4. Katra Neel.....	62.0	46.5	16,735	302	403
5. Shradhanand Bazar.....	87.2	65.6	16,426	211	280
6. Jama Masjid Dariba.....	60.0	21.0	23,687	394	1128
7. Maliwara.....	36.0	34.2	21,722	603	635
8. Charkhewalan.....	48.4	45.98	20,107	415	437
9. Ballimaran.....	47.6	43.22	23,513	493	520
10. Naya Bans.....	60.0	41.0	18,664	311	455
11. Fresh Khana.....	49.2	41.8	19,124	388	457
12. Kucha Pandit.....	92.8	44.45	12,928	139	291
13. Kucha Pati Ram....	63.6	38.0	24,205	380	639
14. Kalan Masjid.....	47.6	28.40	15,502	326	545
15. Lal Darwaza.....	86.6	34.2	16,105	440	470
16. Churiwalan.....	38.0	36.1	15,658	412	493
17. Matia Mahal.....	94.4	63.4	21,154	224	333
18. Darya Ganj.....	147.6	94.0	14,946	101	159
19. Chatta Lal Mian.....	47.6	28.0	17,184	360	613
20. Sulwala.....	68.0	48.6	20,014	294	412
21. Roshanara Extension.....	284.8	67.8	24,312	85	358
22. Kamala-Jawahar Nagar.....	232.8	93.0	24,005	103	258
23. Sohanganj Kothi Shora.....	29.2	27.42	24,672	845	900
24. Arya Pura.....	76.8	61.6	17,557	228	285
25. Rahatganj.....	36.6	28.5	11,168	305	391
26. Rara Hindu Rao.....	149.2	51.3	26,588	178	518
27. Pul Bangash.....	52.8	43.82	15,397	291	351
28. Teliwara Tokriwala.....	47.6	36.6	17,706	372	483
29. Deputy Ganj.....	58.8	48.6	17,036	290	350
30. Pahari Dhiraaj.....	40.8	34.2	15,718	385	459
31. Model Basti.....	58.4	44.6	14,210	243	318
32. Manak Pura.....	92.0	66.3	19,416	211	293

33. Qasab Pura.....	102.0	68.0	21,146	207	311
34. Basti Julahan.....	43.6	35.15	16,356	375	465
35. Ram Nagar.....	136.4	72.0	30,245	221	420
36. Qadam Shrif.....	85.6	61.8	26,027	234	324
37. Motia Khan.....	163.2	99.2	17,494	107	177
38. Dariba Pan (Paharganj).....	22.0	19.0	8,505	386	447
39. Mantola (Paharganj).....	30.8	27.55	17,601	568	635
40. Gurgaon Road.....	32.0	30.4	15,254	476	601
41. Chuna Mandi.....	52.0	45.2	18,084	348	399
42. Khajoor Road.....	156.4	93.8	24,607	157	262
43. Tibbia College.....	156.4	95.4	20,489	131	214
44. Kishanganj.....	258.4	154.4	24,312	94	157
45. Dev Nagar.....	115.2	87.2	25,346	220	291
46. Regharpura.....	92.0	69.0	26,600	290	385
47. Pusa Road.....	300.0	165.0	20,560	68	124
	4,413.6	2,652.59	914,632	203	349

Note : Area calculated in acres. Density calculated to the nearest absolute figure.

Source : Figures in columns 2, 3 & 4 are taken from the *Rajdhani Weekly*, Delhi State Supplement, Jan. 1953.

The area covered by the Old Delhi Municipality in 1951 is 6.9 sq. miles or 4413.6 acres approximately. Out of this the built-up area that has accommodated about 9.15 lakhs of people covers 2652.59 acres or 60.1% of the total municipal land. When the net density is worked out after excluding the area of land for streets and parks etc., we get 345 persons per acre. These figures signify that the area under the Old Delhi Municipality is highly congested. With this as our background let us proceed to study the net density of each of the 47 constituencies in the Municipality. The total area, the built-up area and the population of each constituency are shown in Table VI.

For the purpose of our study these 47 constituencies can be grouped into four broader areas based on their functions. They are as follows :

Group I...Business-cum-residential

Group II...Industrial-cum-residential

Group III...Old Residential

Group IV...New Residential.

The constituencies grouped under each area are :

Group I. Kashmeri Gate, Mori Gate, Chandni Chowk, Katra Neel, Shradhanand Bazar, Jama Masjid, Maliwara, Char-kewalan, Ballimaran, Naya Baus and Farash Khana.

Group II. Roshanpara Extension, Kamala and Jawahar Nagar, Sohanganj, Aryapura, Rahatganj, Bara Hindu Rao, Pul Bangash, Teliwara, Deputy Ganj, Pahardiraj, Model Basti, Manekpura, Qasabpura, Basti Julahan and Ram Nagar.

Group III. Kucha Pandit, Kucha Pati Ram, Kalan Masjid, Lal Darwaza, Churiwala, Motia Mahal, Daryaganj.

Group IV. Khajoor Road, Tibbia College, Kishanganj, Dev Nagar, Regharpura and Pusa Road.

The figures show that the constituencies included in Group I have the highest density of population. They are located round about the main business district of the city. As examples we can point out the constituencies like Jama Masjid, Maliwara and Ballimaran. Jama Masjid holds more than 1,000 per acre and Maliwara and Ballimaran hold more than 500 per acre each. However, within the same Group I there are the constituencies of Kashmeri Gate and Chandni Chowk which show a lower density. These two units consist of a large number of shops, banks and Government offices which are occupied during daytime only.

The second highest congested areas are found in the constituencies grouped under III. They are the most deteriorated and the oldest residential areas in the city. A large number of people from the lower income group reside there. Each constituency like Kucha Pati Ram, Kalan Masjid and Chatta Lal Mian holds more than 500 persons per acre. The Daryaganj constituency has a lower density because of the fact that it is a newly built-up area with well-planned houses and wide open spaces.

The third highest areas of density are found in constituencies under Group II. There a large number of industrial labourers resides, and some of the constituencies consist of big mills and factories. Sohanganj and Bara Hindu Rao hold more than 500 persons per acre. Kamala and Jawahar Nagar are recently built-up areas and their density is somewhat low.

The lowest density areas in the city are found in the constituencies grouped under IV. Dev Nagar and Pusa Road have

the lowest. Pusa Road has only 124 persons per acre. They are the newly opened up residential areas of the city consisting of open spaces, wide roads and nicely built houses.

IMMIGRANTS

In one of the earlier sections we pointed out that immigrants have contributed a high percentage to the growth of city's population. Here, the purpose is to show the relative contribution which each of the important provinces has made towards that growth. The percentages computed for the total Metropolitan City show that 62 per cent of the total urban population in 1951 are immigrants. They include 26 per cent from contiguous provinces, 5 per cent from non-contiguous provinces and 31 per cent from foreign countries. The contiguous provinces are Punjab, United Provinces and Rajasthan and the rest of the provinces go under non-contiguous provinces. Out of the 31 per cent foreign immigrants 30 per cent are displaced persons who have come from West Pakistan. The other one per cent consists of immigrants from other countries.

The following Table gives details regarding immigrants in Metropolitan City of Delhi.

TABLE VII
IMMIGRANTS IN METROPOLITAN DELHI 1901-1951

Year	Total population of city	Immigrants				Percentage of total			
		Contiguous provinces	Non-contiguous provinces	Foreign	Total immigrants	Contiguous provinces	Non-contiguous provinces	Foreign	Total percentage
1901	208,575	55,173	3,230	763	59,166	26.5	1.6	0.4	28.5
1921	304,420	94,757	39,116	3,125	137,058	31.1	12.8	1.0	44.9
1931	439,180	156,674	52,021	3,383	212,078	35.7	12.9	0.8	49.4
1951	1,437,134	277,159	65,536	448,858	891,553	28.0	5.0	31.0	62.0

When we compare the figures for contiguous provinces with those of non-contiguous areas we find that a very high percentage has immigrated to Delhi from the contiguous areas. When

we compare the proportion of the sexes amongst the immigrants, we note a higher feminine percentage among those immigrants born in the contiguous areas. This may probably be due to the marriage migration where the wives brought from the contiguous provinces swell the number. Moreover we observe that building constructions in a large number of peripheral areas of the city too have attracted the womenfolk from the contiguous areas. Generally they stay for a period of six months or so and return. On the other hand, there are a large number of single immigrant women who are employed in various administrative services.

A study of the sex ratios for non-contiguous provinces shows that there is an inverse proportion in the female ratio with the distance from which they come. The following table shows immigrants in Delhi from important provinces in India.

TABLE VIII

Province	Total	Male	Female
Contiguous			
Punjab	142,813	75,182	67,631
U.P.	257,638	123,572	134,064
Rajasthan	47,176	23,549	23,627
Non-contiguous			
Pepsu	25,788	10,179	15,587
Madras	3,910	2,583	1,377
W. Bengal	5,655	4,398	1,257
Bombay	8,925	4,788	4,137
M. Pradesh	8,015	5,509	2,506

Out of 5,655 immigrants from West Bengal, 1,257 are females, and out of 3,910 from Madras Province only 1,377 are females. Similarly, it is the case with other provinces except for Pepsu, which is not very far from Delhi.

Many of the immigrants in the city are engaged in occupations like transport, industries, public administration, domestic service, beggary and prostitution. For example, besides a large number of white-collar workers, there are artisans and labourers who have migrated from Punjab, U.P. and Rajputana; from Himachal Pradesh come many domestic servants. A large number of people from Bengal, Madras, Travancore and Bombay

Provinces are in administrative services, commercial firms and in business.

The one per cent of foreign immigrants other than the displaced persons from Punjab come from other Asiatic countries like China, Tibet, Afghanistan, Burma and Ceylon; some are from European countries. Some of them belong to different diplomatic corps; some are students, some are businessmen and some engineers and scientists.

EMIGRANTS

The available data is insufficient to study and form a clear picture of the emigrants from Delhi City during the decade ending in 1951. However, if we assume that bulk of the non-agriculturists are from city areas, then there is official data to show that about 50,000 of them had emigrated to other provinces. In addition, after the partition of India in 1947, nearly one and a half lakhs of Muslims emigrated from Delhi to Pakistan. Thus the total number of emigrants from the city during the decade is about two lakhs. But the four and a half lakhs of displaced persons who entered the city during the same decade more than compensated for the emigration.

SEX PROPORTION

The sex-ratio of a society generally affects the social, economic and many other problems to a greater or a lesser degree. In the year 1951, the population of the Metropolitan City of Delhi consists of 807,905 males and 607,108 females. This shows that there are 751 females per 1,000 males in the city. If we

TABLE IX
PROPORTION OF FEMALES PER 1,000 MALES

Year	1881	1891	1901	1911	1921	1931	1941	1951
Number of females	861	822	817	739	672	670	677	751

compare these figures with those of the satellite towns we note that for the towns the figures are very high. It is about 915 females per 1000 males. The reason for there being less females in the city and more males in the town is that the city is a com-

mercial, industrial and administrative centre where services of males are required while the satellite towns are agricultural maintaining a high proportion of females. Moreover, there is the habit of men migrating for comparatively short periods to cities for work leaving their families at home to look after cultivation and other work. A study of the ratios from 1881 onwards shows that over the decades the proportion of females has declined upto 1941 and risen during the decennial period ending with 1951. This is due to the entrance of a large number of displaced womenfolk from W. Pakistan.

AGE-SEX DISTRIBUTION

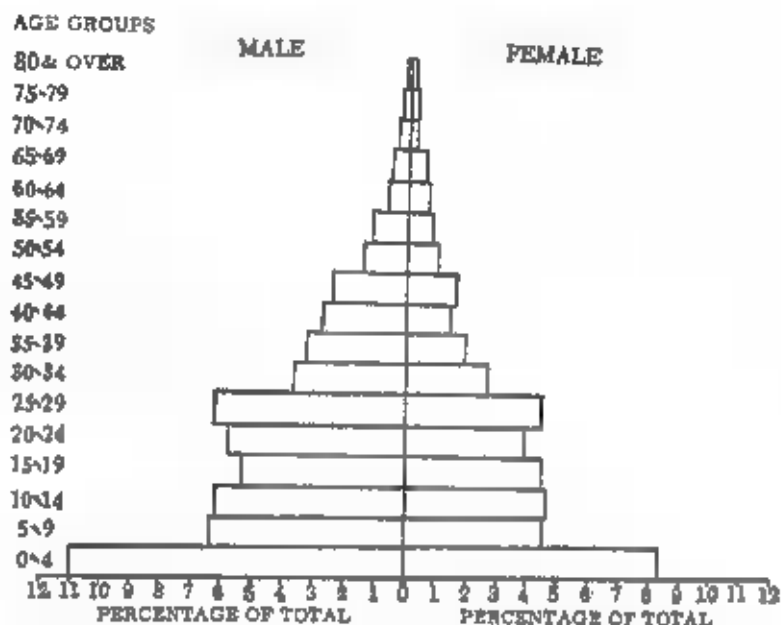
The figures given below are worked out from a ten per cent sample.¹ They are separated into six age-groups as shown in the table. A comparative study of the figures with those of India, shows that the population groups generally resemble those of India as a whole. It is affected to an extent by migration, whatever its type, as can be seen from the fact that each of the

TABLE X
AGE AND SEX

Age groups	Total sample population	Sexes		Percentage of total		Percentage to population of	
		Males	Females	Male	Female	Delhi	India
+ — 0	6,828	4,320	2,508	4.5	2.6	7.1	13.5
1— 4	11,999	6,446	5,553	6.7	5.7	12.4	24.8
5—14	21,215	12,290	8,925	12.7	9.2	21.9	33.0
15—34	33,840	19,806	14,134	20.5	14.6	35.1	20.4
35—54	16,537	10,372	6,165	10.7	6.4	17.1	8.3
55 +	6,150	3,830	2,320	4.0	2.4	6.4	100.0
Total	96,669	57,064	39,605	59.1	40.9	100.0	

two age-groups 15—34 and 35—54 is proportionately higher in Delhi than that of India. However, we have to make a note of the unusual high rate of infants in the sample. This is due to the inclusion of the children of displaced persons in the sample

¹ The Census of India has taken the 10 per cent sample from the balance of the population left after excluding the displaced population from out of the general total population—*Census of India*, Vol. VIII, Report, p. 569.



DISTRIBUTION OF POPULATION BY AGE & SEX FOR DELHI CITY, 1951

Figure 6*

*This histogram is based on the single age returns of a 10% sample of the Census of India, 1951. Note in particular the unusual high rate of infants in the sample population. For explanation refer to text.

though their parents were excluded from it.¹ Even when we make an allowance for errors, the possibility still remains of there being a high percentage of children below 15. In the other groups there is the highest concentration of people in the biologically productive age, i.e., the age group 15-34. It is because of the fact that the city's population consists of a high percentage of immigrants. Though there is no data for the study of age-groups among immigrants for 1951, it can safely be assumed from previous studies that the majority of these immigrants belong to the biologically productive age.² The number of these persons between 35-55 is comparatively small. The percentage of persons above 55 is low.

¹ Ibid.

² Census of India, 1951, Delhi. Vol. XVI, pp. 45-46.

A study of the sex-distribution figures, even after making an allowance for the errors in reporting of age and sampling, shows that in every age-group there is a higher percentage of males than females. The percentages in the infant group of both sexes are high because of the sampling method stated above. The highest is noted in the age-group between 15-34. The percentage of persons over 55 among both sexes is comparatively low. This may be due to the smaller number of aged persons immigrating into the city.¹ When we compare the percentage of sexes in every age-group, we find that a higher figure is shown among the males in the 15-34 age-group. It is due to men migrating to the cities leaving behind their families to look after agriculture and other work.

MARITAL CONDITION

The marital figures of both sexes in different age-groups based on the 10 per cent sample are shown in Table XI below.

On an examination we find that the highest percentage, i.e., 40.8 per cent of the total sample population, are unmarried persons below 15 years. When we compare this figure with that of

TABLE XI
MARITAL CONDITION

Age-groups	Unmarried		Married		Widowed		Percentage of the total sample			
	Males	Females	Females	Males	Males	Females	Un-married	Married	Widowed or divorced	
0-4	10,766	8,061	...	...	...	...	19.5	...	...	...
5-14	11,921	8,056	989	268	...	...	1	21.9	0.6	...
15-34	7,158	2,703	12,308	11,164	340	287	10.2	24.3	0.6	...
35-54	683	160	8,729	4,933	960	1,072	0.9	14.1	2.1	...
55 & over	137	20	2,807	937	888	1,363	0.2	3.9	2.3	...
Total	30,685	19,600	24,213	17,302	2,186	2,703	52.1	42.9	5.0	...

Source : Based on the 10 per cent sample, *Census of India, 1951*.

¹ This figure generally goes down as many of the immigrants do not bring their old mothers, fathers or relatives.

1931 (31 per cent) we see that there is a tendency towards the postponement of marriage to a later age of the young men living in the metropolitan areas. This is mainly due to the legal prohibition and public disapproval of the custom of child-marriage which existed earlier in the area.¹

Among the married we see that the highest percentage, i.e., 24.3 is in the biologically productive age-group between 15-34. This number has gone down among the adults and is very low among the older people. Among the widowed and divorced, the figures in the group 55 and over are generally low. When we compare the marital status among the sexes, we find that the figures for unmarried among males are somewhat high, among the married, both the sexes are more or less the same, and among the widows and the widowers the figures for females are higher than those for the males. The one explanation we put forward is that the people in the city still deprecate widow-remarriage.

BIRTHS AND DEATHS

We have pointed out earlier that a heavy balance of immigration over emigration has mainly contributed to the growth of the population in the city. Therefore the natural increase from the excess of births over deaths is not so important in this connection.

The total decennial births and deaths and their rates for the decade ending in 1951 are given below.

TABLE XII
BIRTH RATE PER 1000 POPULATION

Period	Births	Deaths	Birth rate	Death rate	Net natural increase
	Total Number of births	Total Number of deaths			
1941-51	300,517	135,072	28	13	15

As the figures for previous decades are not available, it is impossible to say whether there is a decrease or increase in the rate.

¹ The Child Marriage Restraint Act, 1929, popularly known as the Sharda Act, provides penalties for the celebration of marriages of male children under 18 and female children under 14 years of age.

CHAPTER IV

INDUSTRIES

FUNCTIONAL CLASSIFICATION OF THE CITY

At the end of the nineteenth century, Delhi was a flourishing commercial city and not an industrial centre. But during the course of last fifty years it made rapid strides in the line of industries and today industries occupy more or less an important place in its occupational structure.

We see, from the table appended below, that about 18 per cent of the total population is engaged in some kind of industrial production to derive their principal means of livelihood while a somewhat higher number, i.e., 26 per cent of the total population is engaged in commerce and activities connected with it. Those engaged in providing services of various kinds are relatively high. They number nearly 50 per cent of the total population. The rest are engaged in transport and communication and in some kind of agricultural operation as their principal means of livelihood.

TABLE XIII
PERSONS (INCLUDING DEPENDENTS) ENGAGED IN
INDUSTRIES, COMMERCE, SERVICES ETC., IN DELHI

Occupation	Persons	Percentage
Production other than cultivation.....	249,740	17.65
Commerce.....	369,309	26.10
Services.....	698,974	49.40
Transport and Communication.....	87,713	6.20
Agriculture.....	9,277	.65
Total	1,415,013(a)	100.00

(a) This total is for the Metropolitan City only.
Source: *Census of India*, Vol. VIII, Part II-A, pp. 58-59.

We observe that there is a marked functional difference bet-

ween the two cities, the Old and the New, which make up the metropolitan city of our study. On one side, there is the old city with its smoky funnels and busy bazaars proclaiming itself an industrial and a commercial centre and, on the other, there is the new city with its well-laid out roads and administrative offices, a city which is truly the administrative nerve centre of India. To support our observations we have separate figures of occupational distribution of the population in the two cities for 1951. These figures bring out the difference very clearly. The Old City's employed persons are occupied as follows: cultivators and owners of agricultural land, 0.4 per cent; production other than cultivation, 22.9 per cent; commerce, 33.5 per cent; transport, 6.6 per cent and public services and miscellaneous sources, 36.6 per cent. The persons employed in different occupations in New Delhi are: cultivation and owners of land, 0.4 per cent; production other than cultivation, 5.7 per cent; commerce, 8.3 per cent; transport, 4.1 per cent and public services and miscellaneous sources, 81.5 per cent.¹

These figures clearly indicate that industry and trade are extensively followed in Old Delhi, while public administration and professional arts and other services as predominant occupations in New Delhi.²

Of the total industrial workers in 1951 about 50,000, according to official reports, are people working directly in factories under the processing and manufacturing group. The

1 These figures include their dependants also. *Census of India, 1951, Vol. VIII, Part I-A Report*, p. 238.

2 Hoselitz, while contrasting the functional divisions between political-intellectual urban centres and economic centres, places Delhi under the former category. We doubt the validity of this classification on the basis of our observations indicated above. Even with its three decade-old University, Delhi cannot still be labelled a city with great intellectual functions like Calcutta.

Redfield and Singer, in their classification of the cities of the modern era and those before the development of a world economy, group New Delhi only, ignoring the position of Old Delhi, under the post-western expansion category cities. The position of Old Delhi, if we are to separate it from New Delhi, among Indian cities during pre-western expansion or post-western expansion cannot be ignored. In the pre-western expansion its fame as an administrative functions and as a centre for the dissemination of an alien culture and in the post-western expansion category, its leadership in native commerce, is unquestionable. Balnes, a keen observer of Indian conditions, went so far as to say in 1891: "Delhi, too, is not left stranded by the stream of modern commerce. Like Cawnpore, it is the great wheat market of the surround-

rest are workers in unorganised industries. In the processing and manufacturing group the highest local occupation is concentrated in the textile and engineering industries. The textile industry has absorbed about 20,000 (40 per cent) of the total workers in organized industries. This figure includes workers in hosiery, lace and thread-ball and lametta manufacturing industries.

LOCATION OF INDUSTRY

Several factors have governed the location of a large number of industries in the city of Delhi. Some of them are : (1) proximity to market, (2) availability of labour, (3) availability of raw material, (4) nearness to communication lines and (5) linkages with other industries. But there are some other minor factors, such as services, amenities etc., which have operated with the major factors stated above. However, we find that the relative importance of these factors always varies with each industry.

On our visit to twenty-two large-scale and small-scale manufacturing industries in Delhi, of a series of questions put to the authorities concerned in each factory, questions No. 5(a) and No. 5(b) were :

- (5) (a) Why did you choose Delhi for your industry? Please state whether because of (a) near lines of communication; (b) nearness to the place of raw material; (c) proximity of the market; (d) availability of labour, or (e) any reasons other than those indicated.
- (b) Why did you choose this site in this part of the city for your factory? Please state your reasons. What are the advantages and disadvantages of this site?

ing tract, and manufacturing industry also is alive there. It has, moreover, the prestige of former metropolitanism, and is well known to many of the country folk all over north and central India, to whom Calcutta and Bombay are names of no significance."

[See: B.F. Hoselitz, *The Role of Cities in the Economic Growth of Underdeveloped Countries*, *The Journal of Political Economy*, LXI (1953), p. 203; Robert Redfield & Milton B. Singer, *The Cultural Role of Cities*, republished in *Man in India*, 36 (1956), pp. 167, 168; and J. A. Baines, *General Report on the Census of India*, (1891), p. 82].

Answering question No. 5(a), six large-scale industries and nine small-scale industries stated that the proximity to market was the most important factor considered though there were other minor factors too, which influenced their choice for the site of industries in Delhi. These industries are : textile including hosiery and thread-ball manufacture, flour mills, enamel ware, pottery, biscuit manufacture and ice manufacture. Cotton weaving and spinning mills, which were established earlier because of Delhi's nearness to places of raw materials, now have a tendency to locate their mills in areas closer to the market. Availability of raw materials and proximity to market have always been important in determining the site of pottery industries in Delhi. The pottery factories in Delhi get clay from the nearby villages, Kusumpur and Mahipalpur.

We observed that some of the industries like tin manufacture, and lace and braid manufacture are linked up with others. Containers from tin industry are used for packing of edible oils, fruit products etc., while cotton and silk-woven name tags and labels manufactured by lace and braid industries are used in hosiery material.

Answers for 5(b) also varied. In response to this question the majority of the industries located in Subzimandi area of the city stated that the locality was not far away from the main business centre, that transportation of goods to the railway yard was easy and that there was enough labour available in the area. For example, the textile industries in Subzimandi employ a large number of workers coming from the neighbouring areas. Similarly, there is enough female labour available there for work in biscuit factories and also in thread-ball manufacturing works. Two of the biggest flour mills are located in Subzimandi, one along the railway lines and the other along the Grand Trunk Road for the important reason that wheat and flour can be loaded and unloaded easily by lorry or by railway.

Pottery works are situated on the Factory Road closer to the source of raw material on one side, and to the market on the other. Brick kilns are located near the New Industrial Area along Najafgarh Road and also in Yusuf Serai Village.

Most iron and steel industries are located in the New In-

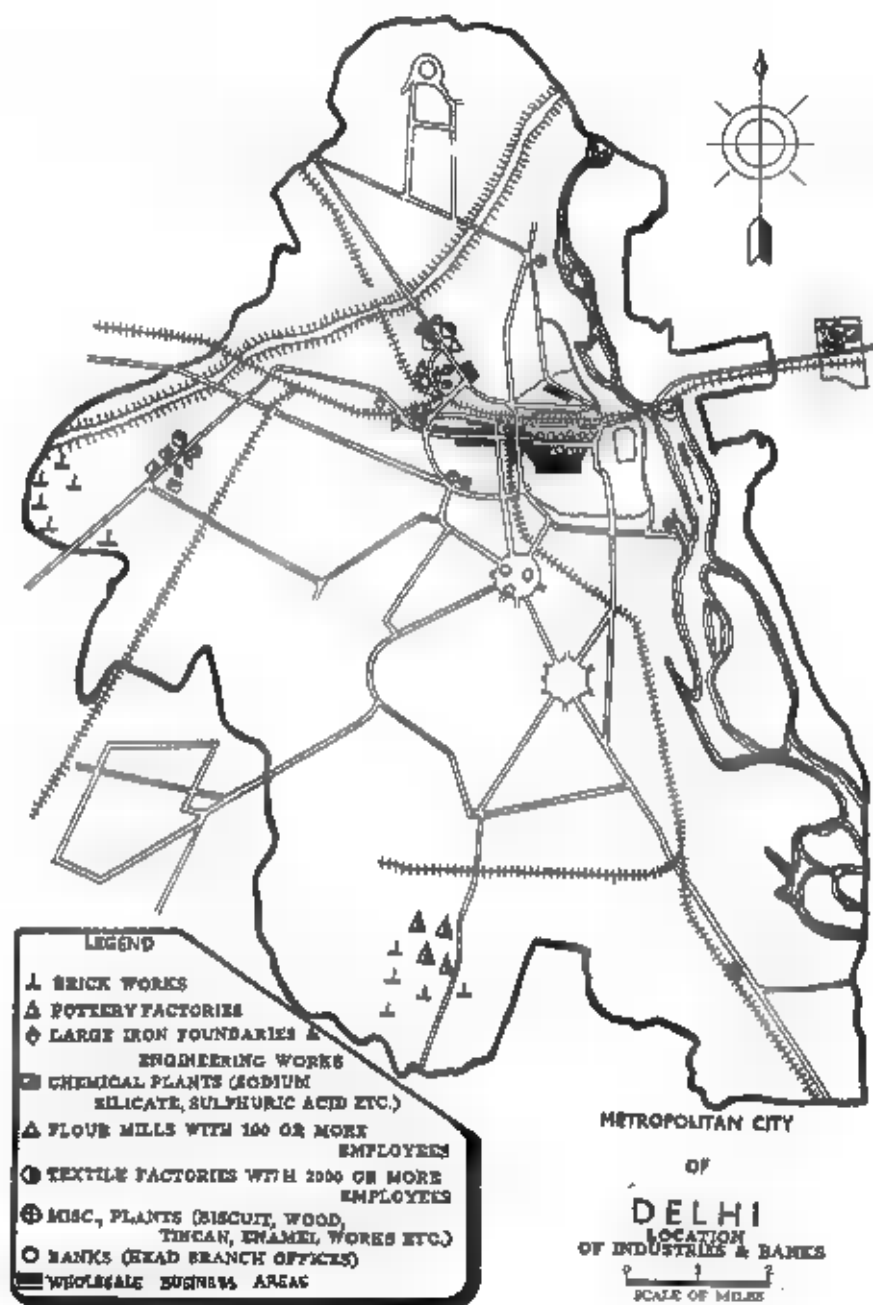


Figure 7

dustrial Area and in Subzimandi. They are very close to the railway yards.

Location of some of the industries in Delhi is also governed by the high cost of land and unavailability of a suitable place for a mill. Services such as water and electricity are also factors responsible for the location of chemical industries in Delhi.

Industrial Nucleus

The industrial nucleus of a city, as defined in this work, includes the area where the large-scale industries are located. Our study of the location of individual industries has made it quite clear that the nucleus of Delhi's industries lies in the north-west part of the city in one area, Subzimandi. In other words we can say that the main industrial area in Delhi lies on the north-west outskirts of the city proper. The distance from this nucleus to the main commercial centre is only two and a half miles. All the textile and flour mills and also the biggest engineering works are located in this area.

We find that from the above-defined nucleus the use of land for industries in the city has extended in the same direction to a distance of about two miles along the railway lines.

GROWTH OF INDUSTRIES

Industries in the modern sense of the term did not exist in Delhi prior to the advent of the British. Before that, Delhi was well-known even beyond the borders of India for her indigenous industries. Some of them were: ivory-carving, carpet weaving, gold and silver embroidery works, gold and silver ware, copper and brassware and muslin manufacture. At that time all the skilful artisans from the countryside flocked into the city.

When, in the middle of the nineteenth century modern methods of producing goods by means of power-driven machines were introduced many of these indigenous industries disappeared in the natural course as they could not compete with them. However, there are a few of them which have survived to this day. These will be described in the relevant sections of this chapter.

Delhi can boast of a good market for manufactured goods,

but not as a place for important raw materials (see Chapter II). Hence the manufacturing industries arose late in the nineteenth century, only when raw materials began to flow in smoothly by railway and by highway transport from the neighbouring areas and further afield from the larger ports like Bombay and Calcutta.

The first power-utilizing manufacturing industry was started in Delhi in the seventies of the last century when the foundation was laid for a factory to manufacture sugar-cane crushers. A few years later, in the eighties, another group of four mills was founded, two were cotton spinning mills, one a biscuit factory and the other a flour mill. All of them were located in the present Subzimandi area.

In the decade between 1900 and 1910 four more factories sprang up, two of them being spinning and weaving mills, one an engineering works, and the other, for the first time, an ice factory. By 1910 the total number of factories including other minor industries like printing and biscuit-making did not exceed 22 and the total number of workers employed in them was about 3,500.

After the shifting of the capital to Delhi in 1911, there was more progress in its industries, specially in engineering and constructing works. During the same period several reverses in its cotton mill industry were observed mainly because of the high cost of transport of raw materials and also of machinery. Nevertheless they recovered, though with difficulty. In the years 1917 and 1918 two flour mills were opened up. The period from 1923 onwards upto 1927 was a prosperous one specially for textile industries. The reduced production of goods in Bombay and Ahmedabad made the local spinning and weaving mills work at full pressure to supply the needs of the citizens. At the same time a number of hosiery factories and a few biscuit factories were also set up. Similarly, there grew up a few pottery factories too. The average wage of a male worker at this time came to about one rupee and two annas, and that of a woman annas seven per day.

Between the years 1930 and 1934 there came up for the first time a match making factory and also an acid manufacturing factory. An oil mill was started in Shahadara. The total

number of workers in different modern industries was about 13,000, 80 per cent of them being textile workers.

The real growth of industries began only after the declaration of war in 1939. It was due to two reasons. First, the defence services required an unbelievably large quantity of manufactured goods which they could not import from outside and secondly, there was a great demand for locally produced goods because of the growing spirit of nationalism. The total number of industries at the end of the war in 1945 grew up to 227 with about 36,000 people engaged to keep the machines going on.

After 1945 some of the factories which manufactured goods for the Defence Services were closed down. But some continued production, tiding over the difficulties.

The partition of India in 1947 gave a fresh lease of life to Delhi industries with enough labour and capital transferred from West Pakistan. The 1951 census brought in a return of 431 factories of various sorts with about 40,000 workers engaged in them. The large-scale and small-scale manufacturing industries together numbered 3,478 providing employment to about 50,000 workers in the city. The total investments in those industries amounted to more than Rs. 16 crores.

INDIVIDUAL INDUSTRIES

Cotton Mill Industry: Delhi lies within the boundary of the northern cotton belt and is well-known for its cotton mill industry. The first cotton mill was started in 1888 after the introduction of better transport facilities to other parts of the country. The number gradually increased to four in the first decade of the nineties. There were 1,808 persons employed to work on 74,360 spindles and 375 looms.

After 1910 the conditions improved slowly. Some had to tide over the difficulties caused by the depression at the end of the First World War. By 1951 we find seven cotton mills working with 15,333 employees. The total number of spindles and looms is 162,593 and 2,254 respectively. The biggest textile mills in Delhi today are: Birla Spinning and Weaving Mills, Delhi Cloth Mills and Swatantra Bharat Mills. The total capital investment in cotton mill industry today amounts to

rupees four crores as against two and a half lakhs in 1910.

Cotton weaving and spinning mills are largely concentrated in the north-west area of the city in Subzimandi. Raw cotton comes from the Metropolitan District of Delhi and also from Punjab, U.P. and Bombay and the finished goods are either sold in the local market or sent out mostly to the markets in U.P., Rajputana and Punjab.

Hosiery: Another type of textile production is hosiery. Delhi is now well-known for this industry. The establishment of the first hosiery factory goes back to the year 1909. After a long chequered career it has turned into a flourishing industry now. There are about 78 hosiery factories in the city with an invested capital of about Rs. 20.72 lakhs. About 800 people are employed in them.

Many of the hosiery factories are located in Subzimandi from where they can draw enough labour. But there are some near the commercial areas of the city in places like Hauz Khaz and Sita Ram Bazar Street.

They manufacture cotton underwear, socks and stockings, ties and other similar articles and also knitted goods for ladies' wear. They import yarn from places like Bombay and also from Madras, and export about 50 per cent of the manufactured goods to Punjab, Bombay, U.P. and Rajputana.

Lace and Braid Industry: Lace mills with modern machinery were laid up in 1933. Before the war there were 12 establishments and now the number has risen to 17 mills. About 300 people work in them. The total capital invested is about eight and a quarter lakhs. Some of the goods produced are cotton and silken woven labels for hosiery trade, name tapes for household linen, and bandages.

These industries lie scattered fairly throughout the city but have a tendency to shift towards Subzimandi.

Thread-Ball Industry: This is one of the oldest industries in Delhi. The first factory with modern machinery was started in 1893. By 1917 the number rose to 30 factories and now there are about 86 factories providing employment to about 580 workers. About 85 per cent of them are women. The total investment is about 14½ lakhs of rupees. Mercerised and crochet yarns are imported from Bombay.

Gold and Silver Thread Industry : This can be classed as a cottage industry in Delhi. It is an indigenous industry and there are about 28 establishments employing about 640 people.

The gold and silver thread is used to decorate men's waistcoats and ladies' bodices and also for embroidery work. The goods prepared by the establishments are exported to U.P., Punjab, Kashmir and other places.

Most of the workshops are situated round about the main commercial centre.

METAL MANUFACTURE.

Metal manufacture includes the smelting of metals, their refining and the manufacture of goods like sheets, rods and bars for engineering works. They are an essential part of the industrial organization of the city.

An iron foundry to produce two-roller iron sugar-cane crushers was for the first time established in the seventies of the last century. Today there are 173 large iron works in the city. Many of them manufacture spare parts of textile, flour and sugar mill machinery, sugarcane crushers, sanitary fittings, water pipes, meter boxes, various types of nuts and bolts, fans etc. More than 4,000 workers are engaged in these industries.

This industry ranks second among others in Delhi. Many of the factories are situated in Subzimandi and also in the New Industrial Area.

Metal Goods : There are a large number of metal goods manufacturing industries in Delhi. The goods produced include boxes, tins and also trunks, safes, cash boxes, buckets, etc. Tin-can industries are linked with other industries in the area. There are about 1,000 workers engaged in them.

Some of these factories are located in Subzimandi and some are found in other parts of the Old City. There are a few working in and near the main commercial centre.

Copper and Brass Manufacture : Manufacture of copper and brass utensils is one of Delhi's indigenous industries. Delhi is the biggest producer of these goods in Upper India.

The total number of workers engaged in this industry, according to Census of Industries, is about 4,300.

Sheets of copper and brass are mostly imported from Bom-

bay, Calcutta and Madras. Some of the household utensils manufactured from them are: kettles, plates, water pitchers, betel containers, spoons, tumblers, hookhas, and bells.

These industries are housed in buildings constructed for residential purposes and are distributed throughout the Old City.

Enamel Ware : There are three enamel ware works in Delhi. The biggest is the Raj Enamel Works in Shahadara and the other two are situated in Subzimandi. Their products include mugs and plates for domestic use, hospital accessories and electrical goods.

General Engineering : This group includes manufacture of oilseed crushers, shearing machines, hydraulic presses, pumps and hand tools.

At present there are 135 works employing about 480 workers. They are widely distributed throughout the city and also in Shahadara.

Automobile Engineering : Delhi is the distributing centre of motor vehicles in Upper India. A large number of omnibus and lorry body-building and repairing workshops are found in the city.

It can be seen that these industries are always linked to the general commercial life of the city. They are generally situated in Connaught Place, along Roshanara Road in Subzimandi and also on Queen's Road not far away from the traffic terminus.

There are several motor repairing garages and many of them have a tendency to shift towards the upper- and middle-class residential localities.

An aircraft repair workshop is located at the Palam Aerodrome.

CLAY AND CLAYWORKS

We stated in a previous section that the principal location factors for the growth of clay industries like pottery and brick-making in Delhi are : firstly, the presence of a suitable clay and secondly, the nearness of a suitable market for sale of manufactured goods.

Today in Delhi there are eight pottery works employing about 500 workers. Two of the oldest and the biggest are the

Gwalior Pottery Works and Kesar Potteries. Gwalior Works was established in 1920 and Kesar Pottery Works, formerly known as Delhi Pottery Works, was established in 1905.

Quartz and feldspar, which are essential materials for pottery manufacture, are imported from Jaipur and Gwalior.

The goods produced are mainly stoneware like pickle-jars and covers, stoneware pipes, electrical goods, hospital requisites and crockery like tea-pots, cups and saucers.

We observe that in Delhi there is a seasonal variation in the production of goods like stone-jars and crockery. During summer there is a great demand for stone-jars in which buttermilk and other cool drinks are stored. During winter there is a demand for tea-pots and cups.

All the pottery works are located at Yusuf Serai Village in the south of the city proper. It is about five miles from the clay sites and about four miles from the market.

Brick Kilns : Any one who steps out of Delhi City is sure to strike upon a cluster of tall funnels as a significant feature in the landscape all round. Today there are about 150 brick kilns employing about 2,500 workers. In 1912, according to official figures, the number was 30 kilns.

Brick making is a seasonal industry in Delhi. As in clay works the principal location factors are proximity to raw material and nearness to consumer market.

CHEMICALS

Manufacture of acids and chemicals in Delhi grew recently to meet the demands created by other industries. A sulphuric acid plant which was founded in Shahadara in 1919 was later shifted to Kishanganj in Subzimandi as the quality of water available at the former site was bad. Today, there are about 30 chemical manufacturing concerns employing about 900 workers. The biggest factory running on modern lines is the D.C.M. Chemical Works in the New Industrial Area.

Some of these industries produce sulphuric acid, nitric acid and some pharmaceuticals and also potassium sulphate, sodium silicate, chlorine etc.

About half of the total number of factories are situated in

the New Industrial Area and also in the midst of residential areas in Subzimandi and the other half in Shahadara.

There are several sodium silicate factories located in Shahadara. The main raw material used in this industry is silica sand and it is brought from Jaipur State.

There are five fire-works industries. All of them are housed in the congested areas near Jama Masjid.

LEATHER

Tanning of leather in Delhi is carried on as a home industry. It is done by Reghars and Khartiks living at Regharpura in Qarol Bagh.

Leather goods manufacture is another flourishing cottage industry in Delhi. Handwork is still prominent in some branches of this industry. The different types of goods produced are : chappals, sandals, attache-cases, handbags, purses and an indigenous type of shoe called the Delhiwalla shoe.

It is estimated that there are about 6,000 leather goods workers in the city.

FOOD AND SMOKE

Delhi belongs to the wheat-eating regions in India. Wheat is grown extensively. Large scale flour production is an important industry in Delhi. There are several flour mills in the city. The three biggest mills are : Delhi Flour Mills, Ganesh Mills and Crown Flour Mills. About 800 workers are employed in them. Besides these, there are about 300 atta chakkis.

The average production of a big mill, during the pre-partition period, was about 13 lakhs of tons per year. With the influx of the displaced persons, the production (according to information obtained), has gone up by about 50 per cent.

The biggest mills import wheat from Punjab and export the flour to U.P., Bengal and Bihar.

Transport and labour are two of the important location factors for Delhi's flour mills. Two of the biggest mills are situated in Subzimandi, one near the railway yards and the other closer to the main high road running to Punjab. The third flour mill is situated near Mori Gate. The small atta chakkis are mostly located in different residential areas of the city.

There are several oil mills in the city. About 300 people are employed in them. They are mostly found in residential areas.

Biscuit Manufacture : One of the biggest manufacturers of biscuits in Delhi is the Britannia Biscuit Factory. The others are small-scale manufacturers.

The biscuit manufacturers have to rely mostly on female labour, specially for packing and labelling. The important location factors are : the nearness to market and availability of labour.

Britannia Biscuit Factory is situated at Phul Bangash in Subzimandi and the others are located in different parts of the city.

Ice : In Delhi ice is used by restaurants, by fishmongers and by hospitals. Fruits and vegetable markets also use it for preserving grapes, apples and other fruits. Today there are about 30 ice factories.

The production of ice in Delhi is seasonal. During the summer they work and during the winter they are partly closed down, in this season ice being used in the fruit canning and bottling industry.

Delhi exports ice to places like Rajasthan, Punjab, and U.P. Some of the factories are located in Subzimandi, some in Bela Road and some in Shahadara. The main services used are electricity and water.

Dairy and Milk Products : There are a number of dairies in Delhi. They are mostly found in the residential localities of the old city.

WOOD INDUSTRIES

At present Delhi is well-known for its wood industry. Many of the factories found in the city make furniture or packing cases and ice chests. Some only saw the big logs of wood imported from outside.

This industry has given employment to hundreds of carpenters, polishers, turners, many of whom have migrated from W. Pakistan.

The wood is imported into Delhi from up-country districts like Gharwal State, Nepal, Dehradun, Hardwar.

About 80 per cent of the wood industries are concentrated in the open lands on the ridge between the Original Road and Kutab Road. This location has become a great danger to the residential areas nearby. Every year two or three devastating fires occur.

MISCELLANEOUS INDUSTRIES

A large number of miscellaneous industries running either as cottage industries or as small-scale industries are found everywhere. According to official figures there are about 20,000 workers engaged in them. They have their establishments at homes, at backyards, at verandahs and at sheds.

Some of these industries are: ivory carving, spinning, basket-making, oil pressing, gold and silver smithy works, hat-making, hookha manufacture, book-binding, knitting, embroidery, tailoring, laundry works and cycle-repairing.

Some of these are described below.

Ivory-carving is an indigenous industry in Delhi. The city is well-known for it. Beautiful articles carved out of ivory are kept for exhibition and sale in Delhi's fashionable centre, Connaught Place.

Many of the workshops are located near the main business centres. The goods produced by carvers are: cigarette boxes, miniature animals and figurines of Gods and Goddesses of Hindu mythology, beautiful caskets, jewellery boxes, country boats and miniature replicas of sacred places in the country.

Handloom weaving is an indigenous industry which, once flourishing, today struggles for its existence. Many of the handloom works are concentrated in a suburban village, Bayana.

Gold and silver ornament manufacturers are found in plenty. A large number of their small workshops are located in Dariba Kalan Road near the main business centre of the city. Several workshops manufacture imitation jewellery too.

Workshops of hat manufacturers are located in places near the main business centre.

Hookha manufacture is conducted on a small scale. Hookha and a Delhi man are inseparable. It is always with him

at the time of sleeping, at his shop, when he is playing cards or even while he is riding a buffalo.

Manufacturers of light wooden beds are also found everywhere. Many workshops are located in the residential areas.

Knitting and embroidery work is exclusively done by women. Many of them are displaced persons residing in different parts of the city.

Cloth-printing is another cottage industry. Printed materials are sarees, bedsheets, and pillow covers. These workshops are located in the retail business areas.

There are hundreds of tailoring workshops. They too are mainly concentrated in the retail business areas.

A large number of laundries and dry-cleaning establishments are run in many parts. They are located in the city in an irregular pattern. We observe that several laundries are run in some neighbourhoods, but in some not a single one is to be found.

Cloth dry-cleaning is another small industry in Delhi. Many of the dry-cleaning workshops and their headquarters are located in Connaught Place and their branches are found in different residential areas in the city.

Bicycle is a very popular vehicle of conveyance in Delhi. This has brought in a large number of cycle repair shops. Some of the repair shops are of a mobile type. A repairer may fix up his workshop under a tree along the main roads and shift it in the evening.

Similarly, there are a large number of tonga-repairing workshops. They are generally located in the Old City where the *tonga* is a common vehicle used by all. Subzimandi, Bara Hindu Rao and Queen's Road are the well known places for such workshops.

INDUSTRIES AND WORKERS

Most of the large-scale industries in Delhi use local labour as well as labour from the areas outside the metropolitan district. We heard from the authorities of some factories that the contiguous states like United Provinces, Punjab and Rajputana contribute a very high percentage of the labour to keep the machines working.

Generally, a working head of a family has about three dependents to live on his earnings. A visit to an industrial worker's house in Delhi will prove it easily. We find that an average worker in a textile mill or in an iron foundry earns a monthly wage ranging from Rs. 80 to Rs. 125. There is no other additional source of income. He is neither trained nor he has time to do such work as would bring in some additional income, nor, for that matter, has he any leisure for it.

However, in some cases, a female member of the household, specially the wife, tries to supplement the family income by working in a light industry like thread-ball manufacture. Even with that additional income an average family of an industrial worker finds difficult to make both ends meet.

The housing conditions of industrial workers are rather poor. Some of the biggest mills like Birla Cotton Mills, D. C. M. Mills and also Swatantra Bharat Mills provide quarters to in all about 8,000 workers. These quarters are situated within five to ten minutes walking distance from the factory.

There are many, about four-fifths of the workers, staying outside mostly living in single room tenements or in hovels. Some of the quarters are situated far away from the mills and some nearby. We see that there is a tendency among the members of a common ethnic origin to live together. There are several places like that in Bara Hindu Rao, Sidipura and also in Sita Ram Bazar. Those who stay in distant places either walk or travel by cycle to their places of work. Bus-travelling is costly and no regular services are extended to these areas.

We note with satisfaction that the Delhi State Government has undertaken to construct 1,376 quarters for the industrial workers under the subsidized Industrial Housing Scheme of the Government of India. This step will solve only a part of the industrial workers' housing problem. If the present productivity of the workers is to be improved, they have to be housed and fed well.

Social welfare work in Delhi industries is not so well advanced. Only about three factories in the city employing more than 500 workers have opened playgrounds and provided other recreational necessities of the factory workers. Some of the authorities in mills stated that they are unable to do so for lack of space.

However, we must point out that recreation is a necessity in the life of a worker. Recreative activities have potent influence physically, mentally and morally on a worker. They lead to the development of a better personality.

There is only one factory in Delhi, viz., Delhi Cloth Mills, where there is a creche opened for the children of women workers. There are other factories too where women are employed for lighter type of work. The creches are a necessity where females work. On several occasions we witnessed mothers working on thread-machines while the children lie by the side or play in between the other working machines.

BANKS

Banking on modern lines was started in the City of Delhi only after the arrival of the British. In 1857 there were three banks. One of them, called the Delhi Banking Corporation established in 1844, had its headquarters in the city and the other two were branches of banks run in Calcutta and Lahore. One was a branch of the Bank of Bengal and the other was that of the N. W. Bank. All these banks at the time acted as credit institutions for the members of the military and civil services, and also supplied a large amount of the capital to run tea and indigo plantations in Upper India.

The Delhi Banking Corporation was housed in a building near Chandni Chowk, the business thoroughfare of the city, and the branch of the Bank of Bengal had its office in the European quarters near Kashmir Gate.

Upto 1900 the progress of banking in the city was very slow. However, during that period it became the headquarters of only one joint-stock bank called Punjab National Bank. It was established in 1894 with a paid-up capital of Rs. 41,000 and deposits of about rupees one and three-fourths lakhs.

After 1900, when the city became the main entrepot of commerce between Calcutta or Bombay on one side and Rajputana or Punjab on the other, the conditions on banking improved. By 1910 the number of banks in the city rose to six. Several of them represented European exchange banks. Those six banks were the Bank of Bengal, the National Bank of India, the Delhi Bank, the Allahabad Bank, the Punjab National Bank and the

Bank of Upper India. All these banks had their offices located along Chandni Chowk.

In 1921, the branch of the Bank of Bengal was converted into a branch of the Imperial Bank of India.

With the transfer of the capital to New Delhi several provincial branches of Indian and foreign exchange banks already in the Old City opened new offices in Connaught Place, the business centre of the New City. By 1935 the number of bank offices in the city rose to 30. They were mainly concentrated at Chandni Chowk and also at Connaught Place.

After the Second Great World War, the conditions of banks in Delhi grew still better. During the decade ending in 1951 the number of banks working in the city rose to 27, eleven of which were schedule and 16 non-schedule banks. They had 74 offices. These figures include the branches of big foreign banking corporations like Lloyds Bank doing the major portion of their business outside India.

Today each of the bank offices stated earlier serves a population more than 23,000 people. The total paid-up capital in the banks of Delhi is Rs. 4,34,00,000 with deposits amounting 57,68,00,000 of rupees. The total area served by all the banks is about 570 square miles.

Even now Delhi can boast as being the headquarters of at least one of the biggest Indian Joint-Stock Banks with a great measure of administrative control centred in the city. It is the Punjab National Bank. This bank which started with one office in Delhi has nearly 301 offices distributed throughout India; 21 of this number are branch offices serving different parts of the city.

In addition there are three non-schedule banks with their central offices located in the city. They do local business. Some of the banks like the United Commercial Bank, National Bank of Lahore, National Bank of India and Punjab National Bank run more than three offices in different parts of Delhi. Almost all the important banks run an office in New Delhi to cater to the banking needs of the people residing there.

The services of banks in Delhi varies. Generally they maintain current accounts for the convenience of business people, and saving bank accounts for those who require

some savings. Some banks provide lockers for the safe custody of jewellery or any other valuable articles. Many of them maintain trustee departments. All the banks advance loans to business and industrial concerns and some like the Imperial Bank of India go so far as to advance money to Government servants.

Twenty-five of the banks, mentioned earlier, are located along the city's main business thoroughfare, Chandni Chowk. Their branches in New Delhi numbering twenty-two are concentrated in the main retail business centre, Connaught Place. There are three offices in Qarol Bagh where about 80,000 people reside. Sadar Bazar, the second biggest wholesale market area has four offices; Naya Bazar, the well-known grain market has three offices; Subzi mandi has two offices; Chowri Bazar, three offices and Paharganj, two offices. The rest of the offices are situated in other business areas.

However, we must point out that some of the important residential localities in the city lack enough banking facilities. For example, there is only one branch of a bank in Shahadara Town to serve a population of 30,000 persons and also a group of light industries. At present most of the business people in Shahadara travel to Old Delhi for their banking.

The service areas of the banks in Old Delhi and those in New Delhi vary. The banks in Old Delhi serve a wider area than those in New Delhi. Those at Chandni Chowk extend their services even beyond the metropolitan district to towns in United Provinces and Punjab. Those in New Delhi serve only the local areas within the metropolitan district.

CHAPTER V

HOUSING

Delhi is fortunate enough to have an open dry plain land in the south which can provide ample space for its expansion. But, even with such natural advantages, the city is regarded as one of the most over-crowded and congested cities in India. This congestion is the result of the combination of many factors. Some of them are : the increase of population, less expansion of land to keep pace with the increase and the unplanned construction of commercial and industrial buildings.

Within the metropolitan city the main housing problem of late years has arisen chiefly in Old Delhi. In Old Delhi the growth of population has been very great and the land expansion negligible.

Our argument can be substantiated with the help of the 1931 and 1951 census figures thus. Between 1931 and 1951 Old Delhi added more than 5,60,000 or 163 per cent to her population. This population includes natural growth and that because of immigrants. During the same period, it increased its area by about 601.6 acres, i.e., 15.8 per cent, of the former area through annexation. In spite of this increase of land area the density of population per acre in the old city rose from 91.1 to 207.1 persons.¹ (Total figures are given in Table V). Similarly the number of houses per acre increased from 19.2 to 22.4. These figures show clearly the congestion and overcrowding in Old Delhi. Similar is the case of New Delhi too. The total number of occupied houses in 1951 is not available. However, the little data at hand indicates that New Delhi too had a very high percentage of increase in population but less expansion on space.

New Delhi city, in the beginning, was planned to accommodate only 80,000 people on a space covering about 20,307 acres (31.78 square miles) of land. But, within the course of two decades, we note that the city population had increased by more

1 These figures are only for Old Delhi Municipality.

than 200,000 (about 325 per cent of the 1931 population). The area annexed to accommodate this population covered only 697.6 acres or 3.4 per cent of the area in 1931. In 1931 there were only 3.2 persons per acre; whereas today we find 10 persons per acre.

This monstrous congestion in the city specially, in the old one, can be easily demonstrated if we study one area as an example. The Jama Masjid constituency which is very near to Chandni Chowk has 144 houses per acre with a density of 1,128 residents. It shows that should a person place a bed measuring six feet by three feet, he will have only ten inches between his head and the feet of the person above and his feet and head of the person below and also one foot space from each of his sides. This does not mean that every one sleeps on one level ground, but it will only help us to explain the picture of overcrowding in Delhi.

TABLE XIV
POPULATION AND HOUSES IN OLD DELHI
MUNICIPAL CONSTITUENCIES, 1951

Name of constituency	Population	Number of houses	Total built-up area (acres)	Number of houses per acre	Number of persons per 100 houses
1	2	3	4	5	6
1. Kashmere Gate.....	20,181	2,361	67.5	35	855
2. Morigate.....	23,390	1,962	46.5	42	1,192
3. Chandni Chowk.....	15,103	1,748	56.3	31	865
4. Katra Neel.....	18,735	2,372	46.5	51	790
5. Shardhanand Bazar.....	18,426	2,324	65.6	35	793
6. Jama Masjid.....	23,687	3,034	21.0	144	781
7. Malkwara.....	21,722	2,850	34.2	83	762
8. Charkhewalan.....	20,107	2,587	45.99	56	777
9. Ballimaran.....	23,513	3,410	45.22	75	690
10. Naya Bans.....	18,864	2,177	41.0	53	857
11. Frash Khana.....	19,124	2,399	41.8	57	797
12. Kucha Pandit.....	12,928	1,618	44.45	36	799
13. Kucha Pati Ram.....	24,205	2,016	38.0	53	1,201
14. Kalan Masjid.....	15,502	1,402	28.40	49	1,106
15. Lal Darwaza.....	16,105	1,664	34.2	49	963
16. Churi Walan.....	15,658	2,232	36.1	62	702
17. Matla Mahal.....	21,154	2,871	63.4	45	737
18. Darya Ganj.....	14,946	843	94.0	9	1,773

Name of constituency	Popula- tion	Number of houses	Total built- up area (acres)	Number of houses per acre	Number of persons per 100 houses
19. Chatta Lal					
Mian.....	17,164	1,725	28.0	62	995
20. Sui Walan.....	20,014	2,126	48.6	44	941
21. Roshanara					
Extension.....	24,312	2,777	67.8	41	875
22. Kamala and					
Jawahar Nagar.....	24,005	2,405	93.0	26	993
23. Sohanganj					
Kothi Shora.....	24,672	2,270	27.42	83	1,087
24. Arya Pura.....	17,557	1,641	61.6	27	1,070
25. Rahat Ganj.....	11,168	1,105	28.5	39	1,011
26. Bara Hindu					
Rao.....	26,588	2,776	51.3	54	958
27. Pul Bangash.....	15,397	2,448	43.82	56	629
28. Teliwara					
Tokriwalan.....	17,708	1,887	36.6	52	936
29. Deputy Ganj.....	17,036	2,881	48.6	59	591
30. Pahari Dhiraj.....	15,718	2,909	34.2	85	540
31. Model Basti.....	14,210	1,285	44.6	29	1,106
32. Manak Pura.....	19,416	2,228	66.3	34	371
33. Qasab Pura.....	21,149	2,531	68.0	37	836
34. Basti Julahan.....	16,358	2,398	35.15	68	682
35. Ram Nagar.....	30,245	2,905	72.0	40	1,041
36. Qadam Shriff.....	20,027	1,771	61.8	29	1,131
37. Motiakhana.....	17,494	1,238	98.2	13	1,413
38. Dariha Pan					
(Paharganj).....	8,505	1,046	19.0	55	813
39. Mantola					
(Paharganj).....	17,501	1,668	27.55	60	1,050
40. Gurgaon Road.....	15,254	1,865	30.4	45	1,118
41. Chuna Mandi.....	18,084	1,748	45.2	39	1,035
42. Khajoor Road.....	24,607	1,712	93.8	18	1,437
43. Tibbia College.....	20,489	1,508	95.4	16	1,359
44. Kishanganj.....	24,312	2,531	154.4	16	961
45. Dev Nagar.....	25,346	1,409	87.2	16	1,799
46. Reghar Pura.....	26,600	3,308	69.0	48	804
47. Pusa Road.....	20,550	1,461	165.0	9	1,407

Note: Columns 2, 3 & 4 are taken from *Rajdhani Weekly*, Delhi State Supplement, 1953. They, according to its editor, are based on Delhi Improvement Trust Inquiry Committee Report, 1951, Vol. II.

PLANNED AND UNPLANNED HOUSING

For the purpose of this study, a house is defined as a structure single or composite intended for human habitation having a separate access to the street or a common landing. Such houses in the City of Delhi are grouped into five types differentiated by

the number of floors, such as three or more storey type, two-storey type, one-storey type, the single-floor type and the shacks. Further they are classified according to their being old or new¹ and also according to their sizes, big and small.

Unplanned Housing

Unplanned houses are found mainly in Old Delhi. The houses of the first type, i.e., the three or more storey houses (Class I), are situated in the central business district of the city.² In size they are generally big and in age they can be classed as old. Each building consists of about 50 to 60 rooms and each floor has about 15 to 20 rooms. The rooms of the ground floor are used either as shops or godowns, and those on the first floor and also on the second floor are generally rented out to offices of commercial firms, banks or insurance companies. The third and the fourth, if there is any, are used as residences of business men and some are put to professional use by lawyers and doctors.

These houses are built to occupy every available inch of land, and there is hardly any space for open yards. They lack fresh air and light. The rooms on the upper floors have an overhanging balcony or a long verandah running from one end to the other of the building. The balcony is generally edged by an open S pattern wooden trellis; and the main entrance to the building is covered by an ogive arch which is a very distinctive feature of Muslim architecture.

The room rent of these houses vary. Pre-war rent ranged from Rs. 20 to Rs. 25 for two rooms and at present they range from Rs. 50 to Rs. 60. These houses are mostly situated along zig zag dark lanes running from the main thoroughfare, Chandni Chowk. Some of the buildings along Chandni Chowk look new as they have been renovated to house commercial firms and banks. The age of these houses varies from 75 years to 100 years or more.

The second type (Class II) is the old two-storey house. The bigger houses of this type are situated along Delhi's wholesale markets of grain, cloth and motor parts. Some such places are

¹ The label 'new' is given to those houses which are not older than 25 years.

² Classes mentioned in this section are shown in figure 8.

Naya Bazar, Sadar Bazar and also Kashmeri Gate. The ground-floor rooms of these houses are used as godowns or show-rooms. Generally the first-storey rooms are used for offices of different commercial firms or agencies and the second floor rooms are used for residences of business men and other workers.

The third type of houses (Class III) are one-storey houses. They too can be grouped into the old and the new. The new houses of this type will be described later under the section Planned Housing in Old Delhi. The old types (Class IIIa) are very common in many parts of the old city. But, majority of them are concentrated in the areas just outside the main commercial and business district and also in the industrial area. Many of the buildings are square-shaped and each floor has about four to five rooms with a small verandah or balcony in the front and also another one in the back. A steep staircase, shoulder-broad, leads to the upper floor either from the middle of the building or from the side. The rooms are rented out, and in each room there resides a family. Some are very much overcrowded. The average size of a room where a family resides is about 10 feet by 7 feet and some are even smaller. Many of these houses lack basic amenities required for human existence. They occupy every inch of space and are situated in cul-de-sacs.¹ Houses of this type are mainly concentrated in Bazar Chitli, Bazar Sita Ram, Hauz Khaz, Paharganj, Multani Danda, Roshanara Garden and in Pul Bangash.

They are occupied by the families of the lower income group in the city. The room rent is comparatively low. It varies from Rs. 5 to Rs. 15 monthly. They are about 60 to 75 years old.

There is another uncommon old one-storey type. These houses are in dilapidated condition. The building runs round a central court-yard. The rooms are used for residential purposes and the court-yard is used to keep cattle. They are occupied by the low income group.

The fourth type of house is the single-floor (Class IV) one. The houses coming under this type can be grouped into two sizes and ages. The old single-floor tenement type (Class IVa)

¹ Some houses facing New Delhi from Ajmeri Gate to Delhi Gate have been torn down by the Delhi Improvement Trust to make room for new construction. See Section under Programmes of Slum Clearance.

has a row of rooms in one building. Each building has about 5 to 6 rooms and each room is occupied by one family. There is hardly any verandah and the front door opens directly into the narrow lane. The room is used for cooking and also for sleeping. The occupants of these houses belong to the low-income group. Many from amongst immigrant labour reside in them. A large number of such houses are found in Bara Hindu Fao, Shidipura and also in Beaden Pura areas in Qarol Bagh.

The old single-floor bungalow type houses (Class IVb) are found in the Civil Lines Area. All those houses look like the manor houses of the 16th century England and are nearly 100 years old. Many were built by the Imperial government officials who occupied the area after the Mutiny in 1857. Some of the well-known standing specimens of these types are the Lur'low Castle and the Metcalfe House. These houses are big, and the presence of either Gothic arches or classical colonnade is a special feature of their architecture. Some houses contain a central chamber surrounded by spacious rooms. It is said that those central chambers were formerly used for dancing parties. There is a spacious garden in each house. The majority of these houses now are occupied by the upper income group and some are used for Delhi State Government offices.

The other two groups, c and d, under Class IV are found in New Delhi.

Planned Housing in Old Delhi

There are four planned housing areas in Old Delhi. The first area is in Daryaganj, the second in Subzimandi, the third in Model Basti and the fourth in Qarol Bagh. The houses in these areas too can be grouped under the different types we mentioned earlier.

The first area in Daryaganj consists of three-storey type new blocks of houses (Class Ib). Each floor in a block has three to five flats, each consisting of two rooms, kitchen, bath-room and lavatory. The rooms are spacious and well-ventilated. Generally a single family occupies a flat. In the centre of a group of blocks is a playground and for the whole area there is a separate market called Anzari Market. The houses are not more than 10 years old.

These houses are mostly occupied by upper and upper middle income groups. Some are officers of commercial firms, some business men and some industrialists.

The second area lies on the northern border of Subzimandi proper. This area goes under the popular name; Jawahar, Kamala and Shakti Nagars. Most of them are one-storeyed new tenement houses (Class IIIb) and are not more than 10 years old. There are spacious lawns or open spaces between a group of blocks and also very wide roads running in between. Generally, each flat in a block consists of two rooms, a balcony, a kitchen, bath-room and lavatory. They are occupied by those belonging to the middle income group, such as clerks, teachers, doctors, and a few businessmen.

The third area is in Model Basti. It lies on either side of the Mutiny Memorial Road. Majority of them are one-storeyed houses. They are not more than 10 years old. They too are just like the houses in Jawahar and Kamala Nagar. They are occupied by families of the middle income group.

The fourth area is in Qarol Bagh. This area lies between New Rohtak Road in the East and Pusa Road in the west. They are mostly one-storeyed new tenement houses. In the midst of a group of houses there is an open space allotted for a playground. Each house too has an inner courtyard. The rooms are spacious and well ventilated. A family generally occupies two rooms and share the bath-room and the lavatory with another. Some have a separate bath and lavatory too. The houses are evenly spread in the area.

Housing in New Delhi

The houses in New Delhi are built according to a certain plan. In this study we shall be grouping them under two different types, such as the one-storey and the single-floor houses, and also into two sizes as big or small. Almost all the houses in New Delhi are new.

One-storey bigger size type (Class IIIc) is found in Connaught Place and also spreads along Bara Kamba Road and Curzon Road upto India Gate. From there the houses run along Cornwallis Road, Prithviraj Road, Akbar Road upto the Race Course. On the ground floor of each semi-circular building in

Connaught Place are the fashionable shops and show-rooms. On the upper floor are offices of commercial firms, semi-Government agencies and also boardings. Some rooms are occupied by families too.

These houses along Bara Kamba Road and Curzon Road are used for residential purposes. But some, which were formerly used as the residences of princes, are now used for government offices. Most of the bigger houses are of ultra-modern style with well-ventilated spacious rooms. Flower gardens and well trimmed lawns are found around them. These houses are generally occupied by a single household or sometimes by two, one occupying the upper floor and the other the lower one. Business men, industrialists and others belonging to the upper income group live in them.

The houses along Cornwallis Road, Prithviraj Road and Akbar Road are also residences of the upper income-group.

A similar type of ultra-modern bigger size one-storey houses also spreads along Mathura Road from Purana Kila to a distance of about half a mile. They too are occupied by lawyers, business executives and also by some members of the diplomatic corps. Here too a single floor of a building is rented out to a single household. Exorbitant charges are made as room rent. The rentals here vary from Rs. 400 to Rs. 600 or even more.

New one-storey small size tenement houses (Class IIb) are found in the area beyond Purana Kila. This area extends along Mathura Road upto Jangpura. Each floor is separated more or less into two halves with a common staircase at the centre. Each half consists of about two spacious rooms, verandah and a separate kitchen, bath-room and lavatory. Many of them are not more than five years old. The upper middle and middle income groups live in them. The rent varies from Rs. 70 to Rs. 150.

The second type of houses in New Delhi is the single-floor big houses (Class IVc). Most of them are situated in the area between the Queensway and Parliament Street. They are houses with spacious living rooms, porticos and wide verandahs. Beautiful lawns are found in the front as well as at the back. Many of these houses are occupied by single families

only. Senior Government officials and others belonging to the upper income group live in them.

In the area near Gole Post Office we find single floor small blocks of houses (Class IV d) separated into two halves. In each half there resides a family. Each half consists of a small verandah, a sitting room, two bed rooms, a kitchen, lavatory etc. The rooms are spacious and airy. Locally they are called B quarters and many of the junior Government officials reside there. These houses are state-owned.

Another type of single-floor small tenement houses (Class IV d) is found in the area lying to the north of Gole Post Office. They are situated along Reading Road, Maude Road, Ibbetson Road and also around the Gole Market. There are two sub-groups in this type. Locally they are called C and D quarters. The total number of rooms in each tenement is more or less the same. Each tenement house has a verandah, one sitting room, two bed rooms, one store room or a servants' room, one kitchen, a lavatory, a bath-room and a walled backyard. In the C quarter there is an additional bath-room and also a lavatory too. The C quarter is more open and spacious than the D quarter. In the D quarter the rooms spread on either side of a small passage which leads to the back court-yard. In the C quarter the bed rooms spread to a side of the main entrance. The rooms of the C quarter houses are about 2 feet broader and longer than those in D quarters. It has a broad back-verandah too. Even the walled backyard of the C quarter is broader than that of the D quarter. The D quarters look like horse stables from outside. But the C quarters are not so. The C quarters are semi-detached tenements, whereas the D quarters are attached tenements built in a row round a rectangular shaped lawn. Families of the middle income group live in both the D and C quarter tenements. Generally the D quarters are occupied by the members of the clerical staff of the Central Government, whose monthly salary ranges from Rs. 150 to Rs. 250. C quarters are occupied by clerks whose salary ranges between Rs. 250 and Rs. 500. Ten per cent of the salary is taken as room rent. These houses too are state-owned.

There are separate single room tenements for members of the menial staff of Government offices.

Shacks (Class V)

Employment opportunities offered attract a large number of poor immigrants to the City of Delhi annually. They enter into very congested areas and also into vacant plots of land and build shacks in order to protect themselves from rain and sunshine. The emergence of this sort of shack-outcrops in different parts of the city, as far as we observe, is the result of the failure of responsible employers to provide accommodation to their workers.

In Delhi there are several places where clusters of shacks are found. Each shack consists of one room only. Sometimes, as in the case of a few shacks near the Municipal High School on Roshanara Road, a common backwall is used to construct a series of shacks in a row. Generally a shack in Delhi has four mud-walls either plain or mixed with big stones. Some wooden planks too are placed in a criss-cross pattern to form a wall. Each has a two-sloped roof supported by the walls. The roofs are covered either with mats prepared out of the long grass called 'juhund' or with pieces of tin or hemp bags. The height of a shack from floor to roof ranges from 4 feet to 6 feet. The length is not more than 5 feet. There is one entrance and it is either covered with suspended hemp bags or with planks. A single family occupies a shack.

The occupants of these shacks belong to the lowest income group. Their monthly earnings range from Rs. 25 to Rs. 40. Some are sweepers, some are quarry workers and some do other low menial work in the city.

Shack areas are found in different parts of the city. In Jandawala, on Roshanara Road, in Gurkimandi, in Qarol Bagh there are large clusters of shacks.

Houseless Persons

There is a large number of houseless people in Delhi too. They make pavements, vacant lands and spaces under bridges as their temporary places of shelter. In the biting cold of one winter night we counted 38 persons, men, women and children, sleeping on the pavements of Queen's Road near the Railway Station and under the bridge of Over Bridge Road, not far away from New Delhi Railway Station. Some of them were vaga-

bonds, some were strayed persons and some were persons who had come in search of work in the city.

LOCATION OF DIFFERENT HOUSE TYPES

In the above sections we have described five types of houses, dividing each type into two different sizes and ages. Here we attempt to review briefly the location of these types in different areas of the city.

Class Ia houses are concentrated in one area only. The boundary lines of this area are : Esplanade Road from the east, Chowri Bazar Road from the South, Lal Qua Road from the west and Queen's Road from the north. Class Ib houses are found only in Daryaganj. The boundary lines of this area are : Faiz Bazar Road on the west, Lower Bela Road on the east, Anzari Road on the north and the old wall of the city on the south.

Class II houses are concentrated in three areas. One area is in Kashmeri Gate, the other in Naya Bazar and the third in Sadar Bazar. The boundary lines of Kashmeri Gate area are : Hamilton Road on the south, southern part of Upper Bela Road on the east, the wall on the north and Kashmeri Gate Bazar Road on the east. Those for Naya Bazar area are : Kari Baoli on the south, Queen's Road on the north, Railway yard on the west and C.M. Road on the east. The Sadar Bazar area has Bahadurgah Road on the east, Sadar Bazar Road on the west, Bara Hindu Rao Road on the north and Tekiwara on the south.

Class III houses are found in several areas. Class IIIa houses, in dilapidated and shum-like conditions, are concentrated in three areas. The boundary lines of the first area are : Faiz Bazar Road on the east, Urdu Bazar-Chowri Bazar and Lal Qua Roads on the north and north-east, G. B. Road on the west and the wall extending from Ajmeri Gate to Delhi Gate on the south. This area stretches to a short distance beyond the railway yards. The second area is in Paharganj. The boundary lines of this area are : Over Bridge Road on the north, Old Gurgaon Road on the south, Chitra Gupta Road on the west and Chelmsford Avenue on the east. The third area is in Multani Danda. Its boundary lines are Paharganj-Sadar Bazar Thana Road on the west, Kutab Road on the east, Over Bridge Road on the south and Sadar Bazar Road on the north. The fourth area is in Sub-

zimandi. The boundary lines are : Roshanara Road on the west and on the north, G. T. Road on the east and Bara Hindu Rao Road on the south.

Class IIb houses are found in six areas. Three areas are in Old Delhi and the other three are in New Delhi. The first area is in Subzimandi. Its boundary lines are : Gurkimandi village on the north, Roshanara Garden Road on the south, University Campus on the east and G.T. Road on the west. The second area is in Model Basti. The boundary lines are : Ridge on the south, M.M. Road on the east, East Park Road on the north and New Rohtak Road on the west. The third area is in Qarol Bagh. The boundary lines are : the Ridge on the south, Ananda Parbath on the north, Pusa Road on the west and New Rohtak Road on the east. The fourth area in New Delhi spreads from the southern part of Purana Kila to Jangpura. The boundary lines are : Purana Kila on the north, Jangpura on the south, Golf Links on the west and Delhi-Mathura Railway line on the east. The other two are isolated areas lying to the south of New Delhi. One lies to the south of Lodi Road and the other to the west of Kutab Road near the Safdarjung aerodrome.

Class IIc houses are mostly concentrated in the area bounded on the north by Connaught Circus, south by Kingsway, east by Bara Kamba Road and west by Queensway. From there it spreads to the east along Prithvi Raj Road and King Edward Road upto Safdarjung Road.

There is one Class IVa housing area in Model Basti in Old Delhi. Its boundary lines are : East Park Road on the south, D.C.M. officers and workers quarters in the north, New Rohtak Road on the west and the D.C.M. Mills on the east.

Class IVb houses are concentrated in Civil Lines in Old Delhi. The boundary lines are : Upper Bela Road on the east, Rajpur Road and the ridge on the west and also on the north and Nicholson and Qudsia Gardens on the south.

Class IVc houses are located only in one area in New Delhi. It spreads between Queensway and Irwin Road to a distance of about three-fourths of a mile.

Class IVd houses are concentrated in two areas in New Delhi. The boundary lines of the first area are : Irwin Road on the south-east, Reading Road on the north-west and Panch quin-

Road on the north-east and those of the second area are : Circular Road on the north, Delhi-Mathura Railway Line on the south, Delhi-Mathura Highway on the east and Minto Road on the west.

Class V areas are distributed in several parts of the city. Many lie on the peripheral areas. Those areas are : Gurki Mandi, Ananda Parbath, Idgah-Jandavala, Roshanara Road, Jangpura, and also along Upper Bela Road.

ECOLOGICAL PATTERN BASED ON HOUSING

Figure 8 shows the main features of the ecological pattern of the City of Delhi based on different types of housing. Class Ia housing area is in the main business district of the city. Immediately beyond that runs in a broad semi-circular band a Class IIIa slum-like housing area. At the eastern end of this band lies a patch of Class Ib good housing and at the northern end lie two patches of Class II housing. Another strip of Class II housing projects out into the north-west from the northern end of the Class IIIa band. From the north-west and west of the outer border of Class IIIa area there spreads Class IIIb new housing areas where families of the middle class income group live. From the southern border of the Class IIIa area is a Class IVd state housing area where the white-collar workers live. It gradually spreads out in a triangular pattern and fades towards the south-east into a Class IVc housing where members of the upper income group live. Beyond this area there spreads out again a long strip of Class IIIb new housing. Two isolated patches of Class IIIb are also found in the south. On the periphery as well as in the central areas are isolated patches of Class V shacks.

For the city as a whole, this pattern points out five important features. They are (i) the houses at the main business district are old and congested; (ii) the housing immediately off this area are in dilapidated and slum-like condition and are of the poorest quality; (iii) somewhat better houses lie just next to the slum-like area; (iv) the best of all housing runs in a semi-circular pattern on the periphery of the city and the shacks occupied by immigrants spread out in patches in the centre as well as on the fringes of the city-area.

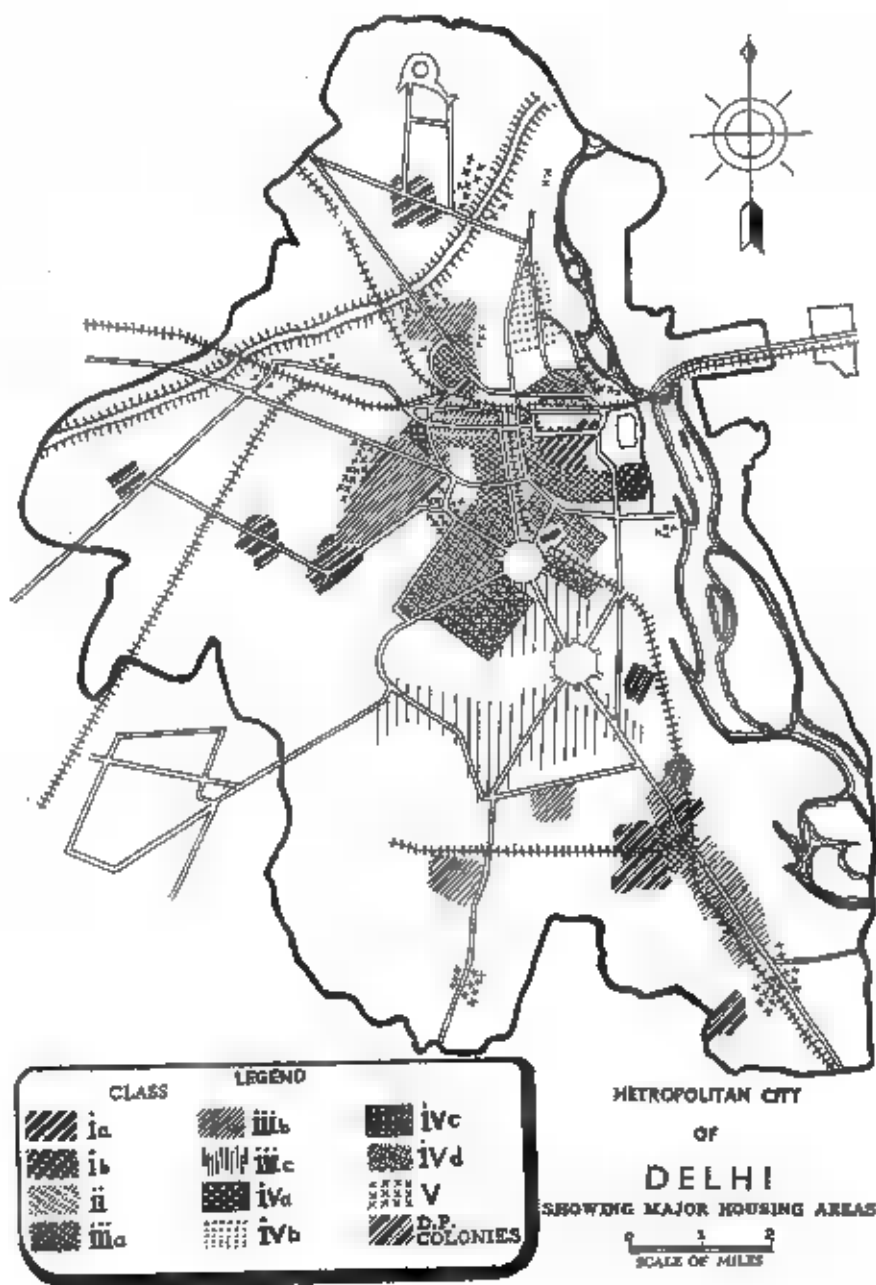


Figure 8

DISPLACED PERSONS' COLONIES¹

When India was partitioned in the year 1947 a large number of people in West Pakistan left their hearths and homes and entered India in search of shelter and employment. Out of all the cities in North Western India, Delhi attracted the largest number of displaced persons because of the economic opportunities it offered. This flow of displaced persons into Delhi was so sudden that overnight, so to say, they grew up with phenomenal rapidity to 5 lakhs of people. The city could not provide them with shelter immediately. There were no proper houses for them to live in. However, about one-third of this population took shelter in the houses vacated by the people who had left for Pakistan and to accommodate the rest the Government had to establish colonies.

In the year 1948 just after the sudden exodus Delhi was allotted a quota of 300,000 persons to provide shelter. Out of them there were nearly 150,000 who had already taken shelter in the evacuee property. In order to accommodate the rest the Government formulated a scheme to open up colonies in many parts of the city and build houses.

Within the course of a year or so nearly 20 colonies covering about 3,000 acres were opened up. The area of each colony and the approximate number of people accommodated are shown below.

TABLE XV
NUMBER OF PERSONS HOUSED IN COLONIES

Name of Colony	Area (acres)	Population
1. Rajendra Nagar.....	255	22,000
2. Patel Nagar (East & West) ..	400	24,000
3. Malkaganj.....	28	2,500
4. Kingsway.....	151.3	18,000
5. Vijaya Nagar.....	40	3,000
6. Nizamuddin.....	33	2,500
7. Nizamuddin Extension.....	64	4,000
8. Jangpura.....	130	7,000
9. Jangpura Neighbourhood....	28	1,500

1 For administrative purposes displaced persons are called refugees. Whether there is truth or not in the application of this term I have purposefully avoided its use in this book.

Name of Colony	Area (acres)	Population
10. Lajpat Nagar (East & West) .	750	45,000
11. Kalkaji	355	17,000
12. Malviya Nagar	400	24,000
13. Bharat Nagar	14	1,500
14. Tilak Nagar	268	15,000
15. Purana Kila	20	8,000
16. Kotla Firozshah	7	1,500
17. Azadpur	9.2	1,500
18. Regharpura	7.5	2,500
19. Anguri Bagh	1	450
20. Purdah Garden	1.8	800
Total	2,958.8	199,250

Our calculations based on the above figures show that the average gross density per acre in the colonies is 67 persons. But the study of the density of individual colonies shows certain variations. For instance, Regharpura displaced persons colony area has a density of about 330 persons per acre while in Jangpura it is as low as 54 persons per acre. This indicates that some of the colonies too have an overspilling population.

Now turning to different housing types, we find that there are two types of houses in the colonies. One type consists of small one-floor tenement houses and the other of one or two storey tenement houses. There are two sub-groups in the small one floor tenement houses. Under one group a tenement house consists of a single room of size 14' 3" x 10' with a verandah of size 14' 3" x 7' 3". In the other group a house has two rooms measuring 12' x 10' each, with a small front yard and also a back-yard. For the sake of convenience we shall be describing the two sub-groups — single-room one-floor tenement house, and the double-room one-floor tenement house. The size and pattern of each type of these houses are more or less uniform in every colony. In one and two-storey tenement house types there are three rooms in each floor of a building with a separate bath and also a lavatory.

For our study we have selected four of the biggest colonies. They are Rajendra Nagar, Patel Nagar (East & West), Lajpat Nagar (East and West) and Purana Kila.

Rajendra Nagar lies in an area to the west of Old Delhi and to the southwest of Qarol Bagh. This area is included in

the Northern Extension area of New Delhi. It lies between the main ridge and its branch called the Ananda Parbath. Here majority of the houses are double-room one-floor tenement houses. A long row of houses runs generally on either side of lanes. The occupants of each have turned the front courtyard to lawns and small flower-gardens. A leafy hedge runs right along the fence skirting the house. These double-room tenement houses were built to accommodate one family only. But in some there dwell one or two more families, mostly those of relatives together.

The occupants of these houses are members of the middle income group. Some are teachers, some are clerks of Government Departments or commercial firms.

Patel Nagar East and West, too lie to the west of Old Delhi and to the north-west of Qarol Bagh. In these two colonies the majority of the tenement houses are either one-storeyed or two-storeyed structures. But there are also one-floor single room types as well as three-roomed bungalow types. Most of these houses are owned by the occupants.

We have stated earlier the number of rooms in each one of the two-storeyed house. Each storey is occupied by a single family. Many of these occupants are well-to-do upper middle income group men. They are connected with business or they work in Government offices. In some areas of this colony people hailing from the same village live together in a group of houses.

Lajpat Nagar East and West are the biggest colonies occupied by displaced persons. They accommodate about 45,000 people. It lies about five miles away to the south of Old Delhi.

This colony has different types of houses. There are single-floor one-room tenement houses, single-floor two-roomed tenement houses and also big one-storey dormitory houses which accommodate about 150 to 250 families in each. The single-floor one-room and also two-room tenement houses are more or less of the same pattern as described earlier. In the dormitory type there is a living room and a kitchen for each family. In the upper storey, there is a small balcony too running round the building. Besides these types there is also a bungalow type consisting of three rooms.

A majority of the occupants belong to the middle income group. There are some belonging to lower income group too. The rentals range from Rs. 8 to Rs. 12.

Purana Kila colony lies about three miles away to the south of Old Delhi. Once upon a time, it was a fortress. All the poorest among the displaced persons live there. The majority of the houses in this colony are one floor single-room tenements. There are about 880 tenements in total. However, some have taken shelter in the old stony barracks or alcoves in the wall. Many of these single-room tenements are overcrowded. In some about two to three families, mostly those of relatives, live together by using the two side-rooms and the common verandah. The lavatories are communal lavatories.

The occupants of these houses belong to the middle and low income groups. Teachers, clerks, peons, carpenters, bus drivers and conductors live here.

Besides those people who live in the colonies, there are about half a lakh or more who still live in 'waifs and strays' and also in roof terraces of the abandoned houses in Old Delhi. Some are squatters on railway sidings and also on vacant lands. A large number of them are mostly concentrated in Qarol Bagh Motia Khan, Paharganj, etc. Along Faiz Road in Qarol Bagh there are about 18 shacks which are worse than cattle sheds. At the foot of Ananda Parbath there are about 22 sheds occupied by them. Near Tibbia College too there are about six families living in shacks built along the road. In Beadon Pura near Ajmal Khan Road there are about eight families living in shacks built on roads.

The general observation we make is that the conditions obtaining in these colonies are deplorable. Many of them lack the basic amenities of life. Some have no filtered water, no electricity, no drains and no proper roads. The rent of some of the houses built for the displaced persons are so high that they lie vacant now.

Location of Colonies

In the foregoing section while describing the housing in the colonies we included a short description of the location of

each colony in turn. Here we shall be describing the location of the rest of the colonies before we proceed to show how they have helped the spatial growth of the city.

To the north, north-west and west of the city lie the following colonies : (1) Kingsway camp, (2) Vijaya Nagar, (3) Malkaganj, (4) Azadpur, (5) Rajendra Nagar, (6) Tilak Nagar and (7) East and West Patel Nagar. To the east of the city lie (1) Anguri Bagh and (2) Purdah Gardens. To the south and south-east of the city are (1) Kotla Firoz Shah, (2) Nizamuddin and Nizamuddin Extensions, (3) Jangpura Neighbourhood A & B, (4) Lajpat Nagar (5) Kalkaji and (6) Malaviya Nagar.

Now the location of each colony not described in the previous sections runs as follows : Kingsway Camp lies at the northern end of the city on the northern side of Karnal Road. Next to that there is Vijayanagar which belongs more or less to the same group though it is identified separately. This colony lies between Karnal Road and the University Campus. Further up in the north-west along Delhi-Karnal Trunk Road lie the Azadpur colony. It is about three quarters of a mile to the north of Azadpur junction. The Malkaganj colony is situated at the foot of the ridge near Subzimandi. About a mile away to the north-west of Subzimandi is the Bharat Nagar. It lies between Delhi-Rohtak and Delhi-Ambala railway lines. Tilak Nagar lies in a typical rural setting on Delhi-Najafgarh Road. It is about four miles to the west of Subzimandi. The location of the other two colonies, Rajendra Nagar and Patel Nagar lying on the west of Delhi, has been described earlier. The Anguri Bagh and Purdah Garden colonies lie to the east of the city near Delhi Fort.

The nearest colony to the old city lies in the south at Kotla Firoz Shah. It is situated near Delhi Gate not far away from the Delhi-Mathura Road. Along the same road farther away to the south lies the Nizamuddin colony and its extensions. They lie on either side of the Mathura Road near Humayun's Tomb. Another half a mile to the south and to the east of Delhi-Mathura road lies the Jangpura A & B colonies. From its southern border runs the Safdarjung railway line. On the south of this railway line about a mile to the east of Delhi-Mathura road ■ the Lajput Nagar we have described earlier. Further down in the south



Chandni Chowk—the hub of Delhi and the major thoroughfare in the commercial and business district.

(b)



Connaught Place—the main retail business centre of New Delhi.



Shack settlements are found scattered throughout the city. Poor immigrants and people of the lowest income group live in them. This is a picture of the settlement at Jhandavala, New Delhi.

(b)



Houses of displaced persons at Rajendra Nagar, West Delhi.

between Chirag Delhi and Mathura road lie the Kalkaji colonies. The Malaviya Nagar lies to the south of Qutab-Tughlaka-bad Road.

Displaced Persons Colonies and City Expansion

A study of the location of colonies when outlined on a map show that they lie almost on the undeveloped peripheral areas of the city. A majority of them have occupied more of the space in the south than in any other area of the city. The total acreage covered by the colonies in the south is about 1,785. Second to this lie the colonies of the western area which have covered nearly 930 acres. The northern extensions occupy only 230 acres of land. East has only 2.6 acres.

This tendency to occupy more land in the south is due to the influence of the important geographical factor, the land. As pointed out in Chapter II more suitable land for occupation is available in the south than in any other part.

CITY DEVELOPMENT AND SLUM CLEARANCE PROGRAMMES

In the above sections we have described and analysed the data on housing in the city. We now proceed to give a general analysis of the execution of programmes being carried out at present in Delhi in connection with slum clearance and city development.¹ The most serious threat to Delhi's health, beauty and decency lies in her slums. The old shacks and other dilapidated and over-crowded buildings, specially in the old city, have become the breeding ground of crime, disease and despair.

Generally, a potential slum exists wherever there is neglect, over-crowding, disorder, squalor and insanitary conditions. Though the slum as an organic order in Delhi has retreated to the periphery of the city places which are definitely akin to slums, if not identical with them, are found everywhere in Old Delhi. For instance, there are such areas in Naya Bazar, in Sita Ram Bazar, in Ajmeri Gate, in G. B. Road, in Paharganj to the south of Original Road, in Multani Danda and in Bara Hindu Rao in the area to the west of Bahadurgah Road.

The Government of India, having realised the importance of city development, and also with a view to solving the slum pro-

¹ For this section I have referred to all the Administration Reports of the Delhi Improvement Trust given in the Bibliography.

blem and improving the conditions of life in intra-mural Delhi conceived the idea of appointing a city improvement trust, the Delhi Improvement Trust, equipped with statutory authority. It was constituted under a Government of India notification dated March 2, 1937. Its main purpose was to carry out the scheme of administration of a large Government estate and also of dealing with the problems of slum clearance, re-accommodation of dis-housed population and town planning.

The activities of the Improvement Trust are mostly governed by the United Provinces Town Improvement Act of 1919 with certain modifications. Three sections mainly concerned with Government estates and Nazul estates were taken later from the Calcutta, Rangoon and British India Improvement Trust Acts and grafted to that.¹ For the purpose of this study we have taken into consideration only that part of the rules of this Act which has been directed solely towards destroying the slums and improving the housing conditions in the city.

Item No. 23(d) says that an improvement scheme may provide for the closure and demolition of dwellings or portions of dwellings unfit for human habitation.

Similarly, in the General Improvement Scheme under Item 25 it empowers the Improvement Trust to frame a general improvement scheme whenever it appears to the Trust that :

(a) any building in any area which is used or is intended or likely to be used as dwelling places ■ unfit for human habitation, or

(b) that danger to the health of the inhabitants of buildings in any area, or in any neighbouring building is caused by (i) the narrowness, closeness or bad arrangement and condition of streets, of buildings, or groups of buildings in such area or (ii) the want of light, air, ventilation or proper convenience in such area or (iii) any other sanitary defects in such area.

Following this, there is the rebuilding scheme which empowers the Trust to frame it when it appears to the Trust that any area is an insanitary area within the meaning of the preceding section and pay compensation in respect of any such reservation or enlargement or reconstruction.

¹ *Administration Report of the Delhi Improvement Trust for years 1937-1939*, p. 3.

From the time of the constitution of this Trust many a scheme has been formulated and executed. Some of them are : the Hathikhana Scheme, the Arakshana Scheme, the Ahata-kidara Scheme, the Qadam Sherif and Siqligara Scheme, the Motia Khan and Serai Purani Idgah Scheme and the Delhi-Ajmeri Gate Scheme.

The Hathikhana slum-clearance scheme covers roughly an area of about 4.91 acres, the Ahata Kidara covers an area of 41.78 acres, the Qadam Sherif and Siqligara 12½ acres, the Motia Khan Scheme 33 acres and the Delhi-Ajmeri Gate Scheme about 68.21 acres. Data pertaining to the areas covering other schemes is lacking. Some of these schemes are still under way. One such scheme and the largest of all is the Delhi-Ajmeri Gate slum-clearance and development scheme. The area dealt with extends from Ajmeri Gate to Delhi Gate along the former city-wall. These schemes seek to acquire congested, unsanitary and ill-arranged buildings and to develop the land for building purposes. Along this area formerly covered by the old wall, today there stretches another respectable blind of modern structures, three to four storeys high, covering from view some of the worst slum-like areas of the city. A similar row of new two storeyed buildings is found along G.B. Road facing New Delhi. The areas under the worst dilapidated conditions are screened by these walls of new houses. They are merely patches and represent little more than a gentle nibbling at the problem.

The same Improvement Act also makes provision for a rehousing scheme which enables the Trust to construct and maintain dwellings provided for persons who (a) are displaced by the execution of any improvement scheme sanctioned under this Act or (b) are likely to be displaced by the execution of any improvement scheme. The rehousing scheme in Delhi is State-aided. Formerly, the houses were allotted to persons whose monthly income did not exceed Rs. 30 (later this ceiling was raised to Rs. 45). The houses built under the scheme are of three standard types : (i) one roomed dwelling covering 102 square feet to accommodate persons not exceeding three, (ii) two roomed dwelling with an area of 204 square feet to accommodate three persons but not exceeding five and three roomed dwelling covering 307 square feet to accommodate over five

adults. In the three roomed house there is a verandah of 72 square feet used as a kitchen and a cutting platform. The report does not mention anything about lavatories. Perhaps there are community lavatories. As regards terms of occupation there is a minimum and maximum rent determined by the occupant's capacity to pay.¹

If we compare these with the rehousing schemes of the poor in the West, the conclusion is that they are far below the general standard. For instance, in England a living room with an area below 110 square feet and occupied by more than two persons is regarded as over-crowded. In Africa, according to the National Housing and Planning Commission of Natal, the minimum standard of housing accommodation for non-European rehoused slum dweller is 118 square feet of living room for two to three persons and 233 square feet area for four to five persons and 332 square feet of area for a three roomed unit for five to seven persons. These figures exclude the area reserved for the dining kitchen, store-room and a separate latrine for each dwelling.² There is evidence to prove that in Moscow where the overcrowding situation was desperate in 1936, two parents and children of ten and twelve had lived in a room about 20 feet long and 8 feet wide covering an area of 160 square feet—a room area which a slum dweller in Delhi cannot hope to get even under the Improvement Scheme.³ The Dudley Committee of the Ministry of Health in England some time ago recommended the increase of the minimum size of the standard house, which was often as low as 700 square feet in the inter-war period, to a minimum of 900 square feet. In addition it recommended an out-building of 90 square feet.⁴ The time when such a Utopia would dawn on the Delhi slum-dwellers seems beyond human ken.

By August 1941, 241 houses had been completed and the 1941-43 triennial programme of the Trust was to build 3,718 new

1 *Administration Report of the Delhi Improvement Trust for the years 1939-1941*, pp. 22-23.

2 The Research Section of the Department of Economics Etc., University of Natal, *The Durban Housing Survey*, (Natal, 1952), p. 471.

3 E. D. Simon, *Rebuilding Britain—A Twenty Year Plan*, (London, 1945), p. 107.

4 *Ibid.*, p. 98.

houses at a gross cost of Rs. 19.44 lakhs. This is only a fraction of the slum-clearance and rehousing problem; but it can be easily concluded that judged by the slow-moving policy of the Trust there are chances for more slums to spring up by the time these schemes are fully executed. As in some American cities, the execution of all these schemes upto now has been like the Mad Hatter's Tea Party.

"Yes that's it", said the Hatter with a sigh, "it's always tea-time, and we have no time to wash the things between whiles."

"Then you keep moving round I suppose", said Alice.

"Exactly so", said the Hatter, "as the things get used up".

Now if we are to assume that the average floor to ceiling height is eight feet, then the volume of air space in houses where people have to live is (1) 816 cubic feet, (2) 1,664 cubic feet, and (3) 2,456 cubic feet respectively. This shows that in a three-roomed house a person has to occupy a cube slightly more than six feet which is regarded as insufficient space in a bedroom for a man to throw the proverbial rat horizontally by its tail. This policy to make rooms smaller is merely a counteraction to face rising costs but is not calculated to allay human suffering. A man, his wife and his family are expected to spend a whole life-time in them. In very primitive regions there is reason for this but it should not be so in the capital which has become the governing centre of four hundred million people.

It is surprising to note that the Improvement Trust Act does not empower the authorities to root out the cause of slums. Even the little the authorities could do by themselves is not done. If the causes are not discovered and dealt with properly, the slum will turn into a canker and will drain the public coffer. The cost of crime, fire, health and other charges will become about ten times higher than what slums pay to the Government as taxes.¹

1 "More than 150 furniture shops and 500 huts went up in flames in Delhi tonight in the first major conflagration of the summer season this year. . . . Thirty-six fire engines battled against the flames. The loss, it is feared, will amount to several lakhs of rupees." (*Times of India*, June 10, 1955). In April 1954, when I was in Delhi, a fire broke out in Motia Khan and nearly 600 huts were burnt down and the loss to property was estimated at about three lakhs.

The slums in Delhi are man-made. These conditions in the city have been created by the landlords who are indifferent to their property and try to 'milk away' by overcrowding and without doing anything to maintain or to provide decent accommodation to the tenants; also by the impoverished tenants who are unable to get away from squalor; and lastly, by the callousness of the local municipal agencies concerned who are careless in enforcing sanitary measures.

"I feel feverish whenever I think of slums" said Prime Minister Nehru recently, while making a speech, a scathing attack on slums and owners who perpetuate them at the cost of poor dwellers. "We should burn down these slums wherever they are," he said.¹ We build houses to provide for space to live in and pay taxes for them to run the public services. According to the present taxation system property taxation puts a restriction upon the construction of new buildings and so indirectly, helps retain the old. Because the basis of assessment on buildings is the 'annual value'—the gross annual rent at which such houses may reasonably be expected to be let from year to year. There is an exemption from this tax when the annual value falls below a particular monetary limit.² As the buildings grow old the taxes go down but the cost of public services to check the obsolescence of old buildings goes up. In order to put a check on this there must be a limitation on the life of a building and the drastic remedy of enforced pulling down should be followed. This limitation of life should be calculated in order to permit the owner to get the same income that he is securing now. A short period, five years or so, should be ear-marked during which period the building will be allowed to produce some revenue-free profit upon his property. Similarly, the uneducated poor people should be taught clean house-keeping and should be helped to improve their economic conditions. There must be strong municipal powers vested in the hands of the Improvement Trust, for the prevention of overcrowding and also for the accumulation of rubbish and requiring the repair or demolition of insanitary structures.

¹ *The Indian Express*, October 7, 1954.

² P. K. Watal—*Report of the Local Finance Enquiry Committee*, 1951.

Side by side with the slum clearance and rehousing schemes it is the responsibility of the Trust to provide new areas for extension in order to relieve congestion and also to control haphazard and unserviced suburban development.

In Delhi there are several such extension schemes under the Trust. Some of them are the Western Extension Development Scheme, the Shadipura Town Expansion Scheme, the Serai Rohilla Town Expansion Scheme, the Roshanara Extension Scheme and the Northern City Extension Scheme. The Western Extension Scheme which is about to be concluded covers an area of 778 acres which comprises a residential block of 189.6 acres. When it is fully developed the Trust expects to provide accommodation for about 53,000 people. Today, the calculation has been belied and the requirements far exceeds this figure. The Shadipura Town Expansion Scheme covers nearly 1,096 acres and spreads from New Rohtak Road to the Imperial Agricultural Research Institute. The Serai Rohilla Scheme covers nearly 540 acres. This area lies between Delhi-Anibala and Delhi-Rohtak Railway lines. The Roshanara Scheme covers an area of 167.41 acres and lies to the north of Roshanara Gardens in Subzimandi. We find that all these areas taken together, lie to the west and north-west of Delhi. Today some of these areas are being transformed into beautiful middle-class residential suburbs with one or two-storeyed buildings. But most of these areas still lack the neighbourhood amenities. There are extant large number of primary schools but no hospitals. Not even a single cinema theatre is to be found in any of the extensions. Marketing centres are not well-developed. Children's parks are insufficient.

When all the schemes are taken into account we get roughly a total area of about 2,800 acres covered by the extensions. Most of these localities before coming under the Trust Schemes were jungly barren lands where Gujars and other criminal tribes dwelt.

NEIGHBOURHOOD RELATIONS

The preceding sections have shown the position and conditions of housing in Delhi as a whole. Here it is intended to select two housing areas, one planned and the other unplanned,

and point out the various influential factors which help or mar the growth of a good neighbourhood and also promote good neighbourly feelings and social relationships among their occupants.

Two such localities we have chosen are the houses along Peshwa Road near Gole Market in New Delhi and the Christian Colony in Devnagar area in Old Delhi Extensions. In Peshwa Road we visited about 32 houses out of 70 and in the Christian Colony 26 houses out of 42 for detailed enquiries. However, the other houses too were visited to get a general picture of the occupants living in the whole locality.

These two groups of occupants have their important similarities as well as dissimilarities. The Peshwa Road houses are occupied by low income-groups, almost all the occupants being the clerical staff of the Central Government in New Delhi. Their monthly income varies between Rs. 200 and Rs. 350. In the Christian Colony the variation of income is slightly greater; the average ranges from Rs. 200 to Rs. 400 per month. But here the extremes are found ranging from Rs. 125 at the lower end to about Rs. 700 at the upper one. This variation occurs as the occupations of the salary-earners are somewhat different. However, many of them belong to the clerical staff of Government Departments and some work as peons in Post Offices or as mechanics in garages. The occupants of both localities are immigrants, the Peshwa Road people being recent immigrants who came to Delhi within the decade ending in 1951. They hail from different parts of India. Many have come from Punjab, Bengal, Madras and United Provinces. The Christian Colony members are old immigrants who have been in Delhi for more than a generation or two. Most of them are descendants of those who had migrated from United Provinces.

From the point of view of religion the two groups of the occupants of the city are followers of two different faiths. All the families of the Christian Colony except four belong to one Christian Church or the other; and the occupants of Peshwa Road belong to one sect or the other of the Hindu religion; they are Arya Samajists, Sikhs, or Arya Brahmas. We came across three families in the sample who are Christians. In language too there is a difference. In the Peshwa Road there is a babel of tongues, languages spoken being Bengali, Urdu, Hindi,

Tamil and Malayalam but in the Christian Colony, it is not so. All members speak either Hindi or English. Their social structure differs widely. The Hindus of the Peshwa Road are caste-observing people. Some are Brahmins and some high-caste non-Brahmins. Three belong to the Scheduled Castes. Those in the Christian Colony are, obviously, a group without any caste distinction, but the four Hindu families living among them are caste-Hindus, though not Brahmins.

In the physical planning of houses the two groups differ widely. In the Peshwa Road area the houses are built on a certain plan. They are undetached and built in a row on the plan of the capital letter L. In the front of each row of houses there is an open piece of lawn. Beyond this lawn is a wide public road through which buses, cars and motor-cycle rickshaws generally run. On the other side of this road too there is another row of houses. At the back of each house there is a small court-yard which is separated by a wall of a man's height. Behind each row of houses there is a small blind alley and each door in the back-wall of a house opens into this lane.

In the Christian Colony the arrangement is quite different. They stand in the form of four cul-de-sacs. The houses are in rows situated on either side of the lane. Each house is separated from the other side-house by a wall. The front of each house abuts into the lane and in some lanes there are houses on opposite sides the fronts of which face each other directly and in others, the front opens to one lane and the back-door opens into another which runs parallel to the former one. In some, the back-door faces the front of another house on the opposite side. The fronts of some houses situated on either side of the lane face each other alternatively. Many occupants usually come through the back-lane and enter the house from the back-door. All these arrangements of houses make people see each other daily, though the family privacy is confined into walled limits.

The method of selecting houses for occupation in the two areas also differ. In the Peshwa Road area the houses are allotted to the tenants by the Government. They cannot select the house that they like to live in. If they are unwilling to live in them, they have to rent out a house (which is, of course, now

difficult) either at Qarol Bagh, at Devnagar or at Tilak Nagar. But in the Christian Colony it is not so. Six of the occupants we came across are house-owners and the rest are tenants who had rented out houses according to their own wishes whenever vacancies occurred. Some of the houses are named. These names generally link the occupants with the tradition and memories of the past. A few of them are *Roslin Building*, *Ruby Villa*, *Daniel Lodge*, *Baid House*. All the occupants preferred this area because of the closeness they have felt by way of religion. This colony grew up without any plan in the beginning of the nineteen thirties and the life-histories of many of the tenants residing in the area show that they were residing within the ancient walls of Old Delhi before. In this area three-fourths of the buildings are occupied by two or three families, each family occupying one or two rooms and using the common lavatory and bath. Generally in a house there is a front verandah, then the main sitting room with two or three side bedrooms. From one side there runs into the side of the back-yard, the kitchen, the bathroom and the lavatory. The court-yard at the back is more or less square in shape, with a few pots of flower plants kept here and there. In this neighbourhood there are no open lawns, as in Peshwa Road area, where people could go out for an airing or talking or where children could play. Their children have to play either within the houses or in the lane. Few yards away within the same area is the church where all congregate for services on Sundays and on other religious occasions. The primary schools too are situated within the walking distance of the children.

This completes our short survey of the physical position of the houses in the localities selected. Now we shall proceed to show the differences of sociability and friendliness affected by them. In the investigations the first query we put to the informants was to name the neighbours, immediately next door either on the side or in the front. This enquiry proceeded with the question as to whether they are Hindu occupants; if they were their caste. Prompt naming of one's neighbour's name or caste does not necessarily determine the intensity of neighbourly feelings. It only shows his awareness of his neighbours to a certain extent. In Peshwa Road area there were eight persons

(heads of families) who could not even give the name of the neighbour next door. They stated only that he is a "U.P. Walla" or a "Bengali" or a "Madrasi", that is the neighbour was indicated by the name of the place from where he hailed. Some failed even to mention such a thing. One said, "I have been occupying this house only for three years. How can you expect me to know his name or caste? What I only know is that he is a U.P. Walla." But such is not the case in the Christian Colony. On the first day when we met a retired old man at the end of the colony and requested him to direct us to houses of 10 persons, Christians and Hindus, whose names had been selected at random from a list, he was able to locate verbally, directionally and specifically the sites of six out of the ten houses. "Yes, yes, I know everyone of them," was his answer. Some, he said, were his good neighbours either living in the house just opposite to his own or on the side. There are reasons for it why everyone knows everyone so well in the Christian Colony. An occupant of a house cannot escape the sight of another person whether a Christian or a Hindu while going out. Either he comes face to face or gets a casual view of him. Secondly, most being members of the same faith, some meet at the Church if not in the street. Hence they come to know each other soon. In the Peshwa Road the physical planning and absence of such places for social intercourse debar the residents from coming into regular personal contacts even though they are Hindus. There is only one such place where many of the community members meet and that is the *Kali Bari*¹. There many people from Bengal, whether rich or poor, high or low, meet together at least once a month or so.

Amongst others, the need of one kind or another, is an element that draws neighbours together and makes for good neighbourliness. Everybody, sometime or other need some help. It may be any one of the several occurrences like the birth of a child, sickness, marriage, and death. In an emergency a person cannot run to his relative or friend far away. He has to depend on the neighbour. In the Peshwa Road area, one said, "We

¹ *Kali Bari* here means Kali's house. There is a temple, a club and also a rest house. This is situated along Reading Road about 100 yards away to the west of Birla Temple.

never go to our side neighbour for anything though he is one from our own caste. We never get his help. At a time of need my wife goes to that house," pointing at a house at the far end of the row where dwells a person from his own province, Punjab. "We never lend and we never borrow from our neighbours." But this was not true in every case. A Bengali Brahmin who had stayed in the same house for nearly eight years said, "One day when my wife was in the bath-room some naughty child locked it from outside. She could not come out. She shouted out from the bath-room and beat at the door. My side neighbour's wife heard her. Her son jumped over the back wall and opened it." However, such cases in the area are rare. All our enquiries at sixteen houses reflected a tendency against borrowing and lending. But it is quite a different story in the Christian Colony. Many a housewife related how she attended the death ceremonies of neighbours on several occasions, the baptismal ceremonies of children, and even the marriage ceremony of a Hindu neighbour; reciprocally how the high caste Hindu neighbour came and attended the marriage of her daughter. One occupant of the colony used to borrow a chair or two from the side neighbour when many guests came to her house. Another said, "When my wife was in labour with our child all the neighbours came to see her. Oh! they are very helpful people. We have no difference between Hindus and Christians except in food."

We found that in the Peshwa Road area there is a sort of greater restriction on sociability and friendliness among women than among men. They seem to keep up to the caste system more than the men. A male member, usually in the evening may walk across the lawn with a child. Seeing this another one, generally a distant side neighbour, may come out on the lawn to walk. There they meet; and when the ice is broken, they start talking about a new Government policy or the rise and fall of prices of commodity goods in the market. They may meet now and again but the friendly dealings are few. But the

1 One informant from the Christian Colony said that at the time of marriage the high caste friends attend the ceremonies but do not eat or drink from their houses. He said that they give rice and other goods to the caste friend for the preparation of his food in his own house.

attitude of women even to this sort of talking with the neighbour's wife is more restrictive and such examples are few. This aloofness and restrictiveness is mostly due to two important facts. They are : (1) the women feel shy to talk with others being very conservative; and (2) some observe purdah. In the Christian Colony it is just the opposite. There the women are not so shy and do not observe purdah at all. This can be illustrated very easily. A housewife may come out and speak to a stranger without any hesitation or shyness. A woman in one house gets engaged in gossip with the woman of the side or the front house. But, the women of caste Hindu families living in this area also lack such a spirit, though their husbands visit or talk with the neighbours frequently. In this area women become very helpful members at the time of death in a neighbour's house. One woman said that on occasions like the Christmas Day, she makes sweets and sends a few to the children of the side neighbour.

The women in the Peshwa Road area have a tendency to make friendship with the folk who have come from the same province or talking the same language. This ethnic group feeling looks stronger than even the caste among the people who have come from different parts. This ■ perhaps due to isolation.

One element which helps to bring women of neighbouring houses together according to our observation is children. Children like to play with children. Small children growing unconsciously generally do not know about the attitude of their parents towards the neighbour with whose children they play. They play and frolic in the lawn. This usually attracts their mothers too. Children do get the opportunity to mix with the children of the side neighbour because of the physical arrangement of houses. The common front lawns of the houses in the Peshwa Road area are their playgrounds. The parents can see them playing from their own houses. One occupant who had taken possession of a house in 1953 and who was able to name easily the immediate side neighbour said, "Of course, our small children play with the neighbour's children. We have no objection to that unless their children are cruel." Another said, "Really speaking I do not like that fellow who is in the next house [the side neighbour]. He is a proud man. But my children play with his

children. What do children know? They always like to play with any one."

But the children are also a hazard to good neighbourliness. The same person to whom a reference has been made previously said that because of children parents come to clash. "That fellow who is living on this side (i.e. right side) is an officer and a great snob. Once when his child beat my daughter, my wife scolded him. Then his wife came out and quarrelled with her. Now I have asked my wife not to send children that way." Similarly we note that family composition also leads to some sort of quarrels here. Near the Gole Market there is one south Indian family. They have a large number of children who are noisy even inside the house. The next door neighbour could hardly tolerate their shouting. He said, "What a noisy people they are. Throughout day and night they shout and jabber. It disturbs my rest at night." One in another house said, "My neighbour has a dozen of children. They shout and play riot here. They climb over the backyard wall and pry into our affairs. One day my wife scolded them."

Though a small matter to begin with children's quarrels later disturb the neighbourly feelings of occupants. In the Christian Colony the activities of the children have less effect on the neighbourliness of occupants. One important reason for that can be the lack of enough space for children to play about. They play either within the walls of a house or in the lane just in front or in the school playground. On some occasions the children of the side-house or the front one join them but not frequently.

Besides other enquiries we tried to study the extent of indulgence in gossip specially among the womenfolk in the localities. Gossiping generally begins when the residents are friendly, when they have enough spare time, and enough space to talk without disturbance and when the physical layout of the residential unit permits them to pry into the affairs of a neighbour. Gossip performs an important function in the lives of both the groups. It helps to keep them together.

We observe a difference in the extent of gossiping in the two areas. The reasons for this are partly the different physical layouts of the two units and partly the lesser and greater neigh-

bourly feelings of the occupants of the two areas. In the Peshwa Road area gossiping is not done generally by the side or the front door neighbours. It is only conducted by the womenfolk who come mostly from the same province or who speak the same language. A common tongue make them speak more freely than a different one. In the Peshwa Road area gossiping groups are fewer than in the Christian Colony.

During the winter season a visitor to Peshwa Road area can very often observe one or two isolated groups of women seated together on a stringed bed and having a chat on the daily affairs or about the neighbours. Sometimes when gossiping goes on, knitting too is done. Excepting these few groups the whole area bears a deserted appearance. Back-garden gossiping too is rare in this locality as the back-gardens are very small and they are walled round. In the Christian Colony gossiping is very often done by the women of the neighbouring houses. The quadrangle in the back of the house is usually their venue. Generally the husband too pays a visit with the wife. While the husbands get together and talk on one side, the women chatter on the other. A cup of coffee or tea goes round. In one case we came to know of a caste Hindu working in the same office with a Christian friend, staying a few houses away, dropping regularly to have a talk with him. The only thing he avoided was taking food from their house.

The topics of gossiping in both the areas range from the daily marketing affairs to behaviour of men and women. Women mostly talk on the bad activities of the neighbours. How the neighbour's wife beat her children mercilessly, or how the husband and wife quarrel daily over trifles. One spoke disparagingly of how the wife of a clerk living in the same row of houses wore a peculiar type of flimsi sari with bands of bangles round the arms and necklaces round her neck. One laughed at the high heeled shoes which were worn by the daughter of a neighbour and at the way she went about Connaught Place making a "tut tut" sound.

In the Christian Colony the layout is such that it opens opportunities for a man or a woman to drop in for a chat; while passing by the houses in this area we have very often heard and seen people wishing each other saying, "Good morning,

Mr. Anderson" or "Good evening, Mary", or "Good night, Samuel." The reason is that the houses are very close to each other and the routes to the outside world are limited. But in the Peshwa Road opportunities for such contacts are rare and one can escape without being noticed either from a corner or from right across the lawn.

Before concluding the enquiries we asked everyone how he or she feels generally about their neighbours, whether Christians or Hindus. The spontaneous answer given by the Christian Colony members were good.

One retired railway Accountant said, "This is a very good locality. There is no trouble from our neighbours. Many of our neighbours are Hindus." One person aged 40, hailing from U.P. and now working in a semi-Government concern said, "I am known to all in the Colony and I know each one here. Our neighbours are friendly and good. We have rented out a room to a young Bengali Hindu." A middle-aged wife of a Government servant and herself an employee at the President's Estate, replied, "Yes, I like all. They are God's creation". However, they spoke bad of the Reghars (the untouchables) whose social status and economic conditions are lower than those of the other Hindu occupants of the area.

The opinion expressed by the Peshwa Road occupants about their neighbours differ. "I do not know our neighbours well whether they are Hindus or Christians. It matters little to me. The only good thing is they don't give us any trouble", said a Government clerk from Punjab. Another one living in a house situated at the corner of the row said, "I don't like these people here. They are snobs and proud people." One from Bengal said, "We don't trouble the neighbours and they don't trouble us." Another said, "Of course, they are fairly all right; but not like my neighbours in Calcutta." Many a person referred to the neighbours of his native town where better friendship and good neighbourliness prevailed.

In conclusion we can state that the reasons for the failure of good neighbourliness in Peshwa Road residents are : (i) re-

1 These names are fictitious. They are not the true names of my informants.

centness in the area,¹ (2) different places of birth and up-bringing, (3) unwillingness to neighbourliness, (4) bad siting arrangements which prevent the residents from coming closer and (5) less social activities in clubs or in temples. Better neighbourliness and sociability among the residents, Hindus and Christians in the Christian Colony are due to (1) long period of occupation in the locality, (2) preference and freedom of choice to live among the people of their own faith, (3) common and regular religious and other social activities in the church and clubs, and (4) the different type of physical layout of the residential unit which facilitates contact with everyone. One significant difference common to both the areas is, individuals of the same economic and educational status have better neighbourly feelings even if they belong to different religions. Both the groups show a different attitude towards those whose economic and educational status is far below them. One such example is the case of the "Reghars."

AN INDIAN "GHETTO"

If we make a close observation of some of our cities we find that in the midst of a vast complexity of institutions and peoples there are smaller groups bearing different cultural and occupational backgrounds; living in different geographical areas; and seeking to maintain their own cultural and occupational forms like the Ghettos, Little Sicilies, China Towns and Black Belts in American cities. These cultural areas have been determined by the ecological processes which also determine the character and function of the city as a whole. The result of the operation of the processes of invasion and segregation has been the birth of an area called Regharpura in Qarol Bagh in the Western part of Delhi.

Before we come to the subject proper it is necessary to give a brief description of the geographical setting of the area. As

1 Promotion in the official hierarchy, retirement or transfer of office in a well organised bureaucratic centre like New Delhi compels its members to change their residences within shorter periods. There is not enough time for them to get attachment to the place of residence or neighbourhood.

2 These suggestions are tentative to an extent. More enquiries and detailed investigations while residing among the occupants of these areas for a considerable period are essential for arriving at definite conclusions.

we have stated in Chapter II the high rocky ridge has thrown out some branches along its length. The low land between these outcrops and the ridge is suitable for human habitation. The earth is not rocky and hard, and wells can be sunk very easily to obtain water. The ridge and the outcrops are wholly rocky and houses cannot be constructed on them easily.

One of such branches of the ridge is called Ananda Parbhat. It is nearly two miles long and is about 80 feet high. The low-lying area between the ridge and the Ananda Parbhat to this day has the same name Qarol Bagh. About 40 years ago Qarol Bagh was covered with jungles, and was dotted by a few hamlets here and there. Some such hamlets were Shadipura, Khanpur Raya and Nariana and Qarol Bagh proper itself. A few brick fields were located here and there, just as we find them in the suburbs of Delhi today. Through the lowest level of land there ran to the east a small stream called Jarhallia nala, now called Ganda nala, which had water during one season of the year only. The inhabitants of this plain were engaged in pig-rearing, leather-tanning, shoe-making etc. The accessibility to the area was by foot-tracks as well as by cart-roads which connected these villages with Old Delhi via Subzimandi.

At this time the City of Delhi consisted of the walled city of Shahajahan and had its suburbs spread upto the foot of the ridge only, and not beyond it. However, when the city was declared the capital of India in 1911 many a change in the use of land took place. The spatial expansion of the city got accelerated. The open space between the ridge and the river was chosen to build up the new city, and within a few years the thinly populated rural country side in the south became a city of fine villas and sweeping avenues.

By this time a steady spread of the residences into the outlying areas of the country had begun in every direction except in the east. Many were along the main roads. Some such invasions on land came on Qarol Bagh area from two directions. One was from Sadarbazar and the other was from New Delhi. By 1931 half of Qarol Bagh was full with modern residences and by 1950 the whole area got filled in with about 80,000 people. There were about 7700 houses.

Now let us study the position of the original occupants of the

land who were living in villages of Shadipura and also in other hamlets in Qarol Bagh. At this time we note that the pressure on land was very strong. The resident population in the area increased within a short time to about 15,000 people and the total number of houses were 2,545. In Qarol Bagh when the invasion was going on, the original inhabitants resisted it on their land and did not shift their position any more. They had no other suitable land to settle down and vacant plots on the other side of Ananda Parbhat were rocky and uninhabitable. The result of this is the birth of the present-day village, called Regharpura, consisting of a consolidation of several hamlets.

Regharpura today lies on the northern part of Qarol Bagh and spreads along the foot of Ananda Parbhat from Devnagar in the east to Shadipura in the west. It is practically hemmed in from three sides by the upper class residences. In the south the boundary lines can broadly be based on Ajmal Khan Road. The total area covered by Regharpura is about 92 acres and contains a population of 26,600. This figure includes people belonging to different castes such as Chamar, Kartik, Chuhra, Lohar, Nai, Brahmin, Kayastha. Among them the Chamars as a single group predominates. They form about one-fourth of the total population. Many of them—about three-fourths portion—are the descendants of the very old immigrant residents in the locality, the other one-fourth only being recent immigrants. This area is one of the most congested.

The Chamars of Regharpura live clustered together in an area to the east of Arya Samaj Road which runs to the foot of Anandha Parbhat through Qarol Bagh. The big drain called Ganda nala, runs right across the Chamar village.

Within this small space of land there are about 7 long lanes and the dwellings are situated on either side of each one. In the middle of the village there is a broad piece of open space with a few shady trees growing in between. At the northern end of this space lies a public well and by the side of it is a broad sandy platform. All this area is treated as common property by the villagers. Every public meeting and the assemblage of people on important occasions take place here. The houses are mostly single-floor buildings, and one family occupies generally one room or in the maximum two rooms in the dwelling. There

are a few one-storey buildings too. Surrounding this village are a large number of one and two-storey ultra-modern buildings where people mostly belonging to the middle income-group live.

This Chamar village has a head called Caudhuri. He is assisted by a group of elders in the village. The Caudhuri is always an elected person. Formerly, that is about 20 years ago, an elderly experienced man in the village was elected as Caudhuri. He could have been an illiterate man too. But now it is not so. He has to be a man who can contact the outside world. He must be a person who knows something about the people living outside and he should be a literate person too. We were informed that for the last two decades they have taken special care to appoint a man with these qualities. The Caudhuri of the village today is about 40 years of age and he is a literate person.

The function of the Caudhuri here is not only to act as the head of the village but also to act as an intermediary between his own people and the other political, administrative bodies in the outside world. Formerly, he was kept informed of every important event in the village, but now only of those important activities which affect the whole village, e.g. the sinking of a well, or the opening of a school or the encroachment on their lands. Now they too have got the full right to vote, and at the time of election the Caudhuri has to decide who is to represent them. He is also the judge who settles disputes in the village. The people have to abide by his decisions. An incident of such nature will be described later.

The Chamar village has its own ironsmith (Lohar) and the barber (Nai). But the position that they have enjoyed upto the recent times is gradually losing ground. Today the ironsmith need not supply his necessary accessories for the work. The Chamar can purchase it from the market located a few yards away. Similarly the barber's position in the village is of lesser importance now. Several modernized saloons are found outside, and generally the younger folk who were his important customers till recently visit them.

Among the Chamars at Regharpura, neighbourhood unity is very strong. A friendly feeling prevails among those who reside nearby and at the time of need they act together as mem-

bers of one family. But the recent immigrants do not take part in such activities. An interesting feature of the Chamar village even upto now is the splendid co-operation. For anything, they try to act in co-operation with others. For instance, house-building and sinking wells are still co-operative. It is said that every one in the village contributed his mite to sink the well which is found in the middle of the village today. The able-bodied participated in the work also. However, this form of co-operation is on the decline.

The traditional occupation of Chamars of Regharpura is shoe-making and leather-tanning. This has undergone a change now due to the impact of urban civilization. A large number of factories have risen up within a walking distance from their village and the younger folk now are running away to get direct economic profits by working in these factories. Even the older folk now feel that shoe-making and leather-tanning are not profitable jobs because of competition and lack of marketing facilities. Moreover they now live in the midst of a world which regards leather-tanning and shoe-making as the worst possible occupations a person can engage in.

The primary social unit in the village is the household. It generally consists of a nuclear family, sometimes an old mother and father living with them. They eat together and also share the labour. Beyond this there is another larger group which includes members from outside. Generally they are members from the male line and come together on the occasion of weddings or funerals or when some one is in trouble. We can relate such an incident which occurred during the course of our stay in the village. There was a quarrel between a man and his wife, who had a house of their own. Everyday the husband used to return home at night drunk and beat his wife. The wife complained of this to her father and also to the Caudhuri through her father's sister. One day the Caudhuri summoned all the elders of the village to settle this dispute. The husband, wife and the relatives on both the sides were also summoned. All of them assembled in the evening, the husband's relatives were on one side and the wife's on the other. The women of both sides stood as interested spectators a few yards away from them. In the middle were seated the Caudhuri and also the village elders. Either

party put forward its case, and while the case was going on some female relatives from the wife's side started haranguing the husband. The challenge was taken up by the husband's female relatives and counter charges were made by them. Thus the verbal battle raged for sometime, but later the dispute was brought to a conclusion by the verdict of the elders and the Caudhuri. The wife was asked to go to the husband and the husband was given a strict warning by everyone. The verdict was accepted by both the parties by exchanging intoxicating drinks. This sort of kin group coming together on important occasions, patching up of breaches in their group solidarity and settling problems by personal contact and intimate discussions are some of the important traits of rural life still preserved in this part of the city.

We observed that no one in the family idles away his time. Everyone does some work. The wife does the cooking and also helps the husband in his work. The old men do some handiwork and even children are taught to contribute their mite to the family budget. We know of several cases where children go out and earn a few annas by polishing shoes or mending them.

The Chamars of Regharpura today occupy a very low position in the urban social structure of Delhi. There is a stigma attached to them and they are looked down upon by the high caste members who live around their village. The people of the area use a general term "Reghars" to designate the low caste members living there. Reghar here generally means a low-caste man or in the technical jargon the "untouchable" or "harijan". Untouchability here does not mean that touch will pollute the bodily purity of a person. It only means that people will not accept food or water from them. The relations between the higher castes and the Chamars living in Qarol Bagh are of special interest. The higher castes dislike them thoroughly. They show a feeling of profound contempt for them in their talk and actions. On several occasions we have heard them saying, "they are dirty fellows; they should be sent away from here." Some say, "they are dirty," and next morning they throw at them their shoes and get these mended. We observe that this caste prejudice has gone a long way in making the Chamars forget their internal disputes and has immensely stimulated group consciousness and

Plate III (a)

In the backyards of buildings, especially in Old Delhi, thrive slums of the type shown here. This is a picture of a backyard - slum in Qarol Bagh.



(b)

Some of the fronts of old buildings along Chandni Chowk are renovated and look very modern. This picture shows a building at the Fountain, Chandni Chowk.

Plate IV (a)

In the suburbs of Delhi camels are still used for riding and pulling carts. This picture is from Okhala in the south.



(b)



Bicycle is the cheap and popular vehicle of transport in the city. This picture shows a group of people on their journey to work by bicycle passing through a street in the city.

strengthened their solidarity to come forward to fight with one voice even at the time of elections.

Today the Chamars at Regharpura live on the periphery of two cultural worlds : the one in the village and the other in the city. They oscillate between the two, undecided which to choose. Their chances to preserve the former are very remote for several reasons. Firstly, the Chamar is deeply attached to his birth land at Qarol Bagh; secondly, the members of the younger generation are gradually getting used to the urban ways of living, and urban fads and fashions permeate them; and thirdly, his dependence on the city economy has greatly increased.

CHAPTER VI

TRAFFIC AND TRANSPORT

ROADS AND CIRCULATION PATTERN

One of the important mechanisms for movement on land of people and commodities from one place to another is the road system. In the socio-economic activities of the people in metropolitan Delhi this road system plays a very important part. It has gone a long way to help the growth of industries and trade in the city and also to bring prosperity to its inhabitants.

The whole road system in Delhi can be divided into two groups: the internal traffic roads and the regional traffic roads. Internal roads described here are those mostly used for the movement of traffic within the metropolitan city limits. All those which link the nearby and distant cities, towns and villages are described under the other group, the regional roads.

For the convenience of describing the internal road system and its pattern of distribution, the two major units of our study, the Old Delhi and the New Delhi, will be treated here separately. In Old Delhi, there are five main roads used by a large portion of the traffic. They are the G.B.-Naya Bazar Road, Queen's Road, Faiz Bazar-Elgin-Lothian-Alipore Road, Chandni Chowk and Chowri Bazar Road.

The Garsten Bastion (G.B.)-Naya Bazar Road begins from Ajmeri Gate and runs in a northerly direction along the railway goods yard upto Queen's Road junction. This road has been broadened recently. It is broad, well-paved, and has two broad pavements running on either side. As it spans Delhi's wholesale grain market the area between Lahori Gate and Queen's Road junction becomes highly congested with heavy lorry and cart traffic. One feature observable over the entire length of the road is the encroachment of shops and godowns on the public pavements. The Queen's Road runs from G.B.-Naya Bazar Road junction to Railway Station West End in a west to east direction. It is broad and well-paved. There are pavements on either side but they are rugged and uneven. Barbers, fruit-sel-

lers and fortune-tellers do business on these pavements. The Faiz Bazar-Elgin-Lothian-Alipore Road is one of the best roads in the old city. It runs along the river from Delhi Gate to Mall in a south-to-north direction. The distance between these two points is about five miles. Faiz Bazar Road, which ran through a very congested area has been widened by the Delhi Improvement Trust recently. It is a broad and straight road now. It enters Elgin Road from the corner of King Edward's Park and runs towards Kashmeri Gate passing the eastern end of Chandni Chowk. Elgin Road is broad, well-paved and runs on fairly undulating land. Two broad open lawns and also a row of shady *neem* trees spread on its either side upto Chandni Chowk. This road enters Lothian Road at the railway bridge. The Lothian Road runs in a north-easterly direction upto Kashmeri Gate and enters Alipore Road. Though Lothian Road is broad, the pavements on its sides are very narrow. It takes a sloping bend near the Polytechnic Institute and runs towards Kashmeri Gate. There are rows of very old two-storeyed buildings on either side, and in some places their frontages abut directly into the road. Alipore Road beginning from Kashmeri Gate, runs through the Civil Lines area. This road is broad and runs on undulating land upto the Mall junction. Near Indraprastha College there is a dip because of the nature of the land which rises up gradually towards the Mall. The Mall begins from the top of the ridge and runs in a north-westerly direction and joins the Karnal Road at Azadpur.

Chowri Bazar and Chandni Chowk Roads run in the heart of the city. Chowri Bazar Road begins from the Jama Masjid in the eastern end, runs to the west and meets Lal Qua Road at the Hauz Khaz Road junction. It runs more or less parallel to Chandni Chowk Road. There is also a tram line running along this road. This is the second busiest street in the city, and it is not so broad as to accommodate all the commercial traffic flowing into the area. There are pavements on either side of the traffic path; but they are narrow.

The busiest road in the city is the Chandni Chowk running through the main business district. Chandni Chowk or "Moonlit Street" is the name now given to the whole road running from Elgin Road junction on the east to the Fatehpuri Masjid

on the west. The distance between these two points is nearly a mile. It is about 150 feet broad. In the centre of the road is the traffic path and just bordering that on either side runs an unevenly distributed row of shady trees. Next to this row of trees on either side are the tram lines running right along from Esplanade Road to Fatehpuri Masjid from where they get bifurcated to run towards the south and the north. Next to tram lines on either side are the pavements. They are raised about six to eight inches above the general traffic path. The pavements are broad at some places and narrow at others. Bordering the pavements are the rows of shops and other commercial establishments. From the Fatehpuri Masjid end the Chandni Chowk Road takes a turn to the north, runs for about 30 yards, turns again to the west and runs through Khari Baoli upto Lahori Gate. This road, too, is one of the busiest in the city. Esplanade Road, Ballimaran and Nai Sarak are some of the important cross-streets linking Chandni Chowk with Chowri Bazar. They too are not broad enough to accommodate all the commercial traffic in the area. The pavements are very narrow. In some places they are not more than four feet in breadth. Besides these main and cross-roads, there are innumerable traffic paths running zigzag, narrowing here and broadening there.

Outside the city-walls of Old Delhi there are three important roads running to the north-west. Two begin from the north-western corner and the other from the south-western one. One of these, beginning from the north-western corner, is the Sadar Bazar Road running from the junction at the railway bridge which connects Kutab Road and Lahori Gate roads, to Bara Hindu Rao. It runs over the slope of the ridge. The other is the Grand Trunk Road which runs through the break of the ridge at Subzimandi. Sadar Bazar Road is narrow but the G. T. Road is broad. There are tram-lines running along both these roads—one on Sadar Bazar Road upto Bara Hindu Rao and the other on G.T. Road upto Subzimandi Clock Tower. All these tram-lines are linked with those in Chandni Chowk. The third one beginning from the south western corner is the Overbridge-Original-New Rohtak Road. This starts from the outer side of Ajmeri Gate and crossing the railway lines over a bridge runs towards the west and joins the Original Road at Paharganj.

It crosses the ridge at Jhandavala and joins the New Rohtak Road on the other side of the ridge. This new road has shortened the distance for vehicles bound for the north-western areas. Formerly it was a long route which ran through Sadar Bazar.

In New Delhi the roads are well-planned and run on a certain pattern. All the main roads radiate from Connaught Place, the main retail business centre in New Delhi and run to different directions. There are nine such roads. They are the Minto Road, Chelmsford Avenue, Panchqua Road, Harding Avenue, Irwin Road, Parliament Street, Queensway, Curzon Road and Barakamba Road. Minto Road runs in the direction of the main commercial district, Chandni Chowk. It has a feeder route called Thomson Road. Minto Road is broad, well-paved and has wide pavements on either side. This is mainly used by the traffic going in and coming out of Connaught Place. Chelmsford Avenue runs towards Subzmandi and enters Kutab Road at the railway bridge near the New Delhi Railway Station. All the traffic coming from and going towards Sadar Bazar uses this road. Panchqua Road runs towards Qarol Bagh. All the traffic coming from and going that way uses this road. Lady Harding Avenue runs towards the Government clerical servants' quarters near Gole Market. Irwin Road runs upto the Gole Post Office and, taking a turn to the direction of President's Estate, runs to a distance of about half a mile and enters Wellington Crescent. All the traffic coming from the Cantonment area follows this road. Parliament Street starts from the Lloyds Bank Building and runs straight upto the Parliament House. Queensway begins from the corner of Scindia House and runs in a southerly direction upto Kingsway. This is one of the broadest roads in New Delhi. Curzon Road starts from the front of the Hindustan Times buildings and runs straight into Kingsway. It passes the well-known cultural institutions like the Constitution Club, the Y.W.C.A. Hostel, the Constitution House and a few foreign embassy offices. Barakamba Road starts from the Statesman Building and runs in a south-easterly direction upto Mandi House. Almost all these roads bear very common features. All are straight and very broad. The width of each is either 150 feet or 120 feet. On either side above the main traffic path are separate footpaths for pedestrians and se-

parate paths for cyclists. In between these paths run long rows of shady trees. At every intersecting point of roads there is a great round turning point which helps to keep a smooth flow of crossing vehicles.

Besides these main roads radiating from Connaught Place, there are other cross-roads, too, used by vehicular traffic. There is the Reading Road which runs along the foot of the ridge. This road is mostly used by the cyclists heading towards the Cantonment or the President's Estate. It is broad and has a long row of pipal trees on either side of the road. Then there is the fine Circular Road which runs from Kamala Market to Delhi Gate along Ram Lila grounds. The other is the Mathura Road running south along the river. It passes the stadium, Purana Kila, Nizamuddin and other well-known historic sites in the south. Long rows of shady trees run on either side of this road upto Okhala village. From there it runs on open country side. Then from the southern side of the Central Secretariat run roads such as the Safdarjung Road and the Prithvi Raj Road.

Within the Metropolitan District of Delhi there are five roads which link the neighbouring towns with the city. They are the Najafgarh-Delhi Road, the Narela-Delhi Road, the Mehrauli-Delhi Road, the Shahadara-Delhi Road and the Okhala-Delhi Road. The last three are linked with the regional highways. These roads run through beautiful countryside. They are broad and straight. The road from Mehrauli to Delhi runs over the undulating land in the south.

In addition to the roads described above there are regional highways converging on the City of Delhi. Six of these highways are: the Mathura-Delhi Road, the Ambala-Delhi Road, the Garhmukteshwar-Hapur-Delhi Road, the Deliradun-Muzaffarnagar-Meerut-Delhi Road, Hissar-Rohtak-Delhi Road and Cawnpore-Aligarh-Delhi Road. The Mathura-Delhi Road passes through the sandy valley of the river Jamuna in the south and enters the city from Okhala village. The Ambala-Delhi Road runs to Delhi from the north. It comes down from upper Punjab. It follows the Jamuna valley from Panipat and enters the city through the crowded Subzimandi in the north-west. The third road runs from Rohtak. It passes the sandy tracts in the west and enters the city now through Serai Rohilla. It joins the

M. M. Road on the ridge. Formerly, it ran through Bara Hindu Rao. The other three regional highways, viz., the Cawnpore-Aligarh-Delhi Road, the Garhmukteshwar-Hapur-Delhi Road and the Dehradun-Delhi Road meet at Ghaziabad junction. From Ghaziabad it runs across the eastern valley of the Jamuna, passes Shahadara town and enters the city through the Jamuna Bridge. This is one of the well-laid regional highways to be found in the whole region. The road between Shahadara town and Delhi city is about four miles long and runs over the low-lying areas of the eastern bank of the river. Annually this road goes under floods for some time. The heaviest regional traffic from and to the city runs along this road.

In addition to the main motorable roads described above, there is a network of railway routes converging on Delhi. From the south there enters the railway route from Mathura. Passing the well-known townships, Palwal, Ballabhgarh and Faridabad, it runs along the Jamuna valley. All the rail traffic coming from the ports like Bombay and Madras enters the city through this line. The other rail route runs from Ghaziabad to Delhi. All the rail traffic coming from Calcutta in the east and Dehradun, Meerut and Moradabad in the north meets at Ghaziabad and runs on this route. This is one of the busiest rail routes in Delhi. The third route runs from the north-west and enters the city through the break of the ridge at Subzimandi. This route touches the important industrial towns such as Ludhiana, Jullundur and Amritsar. The fourth route, touching towns called Jind and Rohtak in the west, enters the city through Subzimandi. There is another line entering the city from the west. It touches towns such as Alwar, Bikaner, Hissar and Rewari in Rajputana.

DIFFERENT TYPES OF VEHICLES

People living in the City of Delhi travel for different purposes. Some travel to work in Government or semi-government offices; some go to work in commercial firms; some to work in industries; some for shopping and others for recreation. When they travel to these places of work, they generally use a vehicle. The type of vehicles used by people always vary.

In the bygone days, when there were no proper roads as are

found today, people used to walk; members of the privileged classes travelled in palanquins; some went on horses or on camels and the King usually rode on an elephant. The goods were carried either on the head or on horses, on camels or on donkeys. Carts, of course, were used. However, in the beginning of the 20th century there took place a radical change in the mode of travelling. When motor vehicles and railways were introduced, people began to use them frequently in order to save time, money and energy. But this does not mean that Delhi people gave up completely the habit of travelling in old types of vehicles. They continued it. Some indigenous types of vehicles are still used by them. These vehicles are the camel, the donkey, the bullock-cart and also the horse-cart.

The camel is generally used in the suburbs. It is used either for riding or for carrying goods on its back, or for travelling or to pull a cart. The camel-cart is a heavy wooden vehicle running on wooden wheels. It is yoked to the neck of the animal. The movement of this type of vehicle is very slow. Next to camels are the donkeys and mules. They are used either by dhobies to carry clothes or by the labourers employed in building construction to transport sand, bricks, or stone on their back. While going to work or returning home in the evening, they enjoy a ride on their backs.

The other popular type of vehicle used to transport heavy goods is the bullock-cart. There are two kinds of such bullock-carts. One runs on four wheels and the other on two. The four-wheeled cart is the *thela*. Its four wheels are wooden except the outer rim which is made of iron. The two fore-wheels are smaller than the two hind-wheels. The axle of the front wheels turns on a hinge. In the hind pair of wheels the axle is fixed to the cart and the wheels turn on it. Generally, one bull is yoked to this cart which has a flat carriage and is used to carry heavy loads, such as bags of grain and logs of wood. The two-wheeled cart is bigger than the *thela*. The wheels are big and made of wood. They turn on an axle fixed to the carriage. The frame of the carriage is made of wood and bamboo. It is long and semi-circular in cross-section. The sides are stringed. Two bulls are yoked to this cart. These carts are generally used in the city to transport long logs of wood or steel bars or bags

of grain. Besides these there are the hand-carts too, pushed by men. Then there are the motor lorries and also vans used to transport goods.

In addition to the goods-carrying vehicles described above, there are several indigenous types of passenger transporting vehicles too. The oldest type is the horse. Today horse riding is rare. Horses for riding are generally used on special occasions like weddings. The bridegroom riding a horse is taken in a procession. However, the horse is used to pull the carriage, the popular name of which is the *tonga*. The *tonga* is a two-wheeled vehicle with a carriage for four persons. The two at the back sit facing backward and the two in the front sit facing the front. There is a padded wooden bar in between the two to lean upon. All these vehicles are not the fast-moving type.

The modern vehicles used on the roads are the bicycle, the tricycle, the motor bicycle, the motor-cycle rickshaw, the motor car, the buses and the railway. The bicycle is the most popular vehicle of the day. It is popular because the cost of a bicycle is within the reach of a large number of people, and furthermore, if a person cannot possess it, it can be hired at low monthly, or daily or even hourly rates. Every nook and corner in the city can be traversed on it. Next to that is the cycle rickshaw in which a carriage to carry a man is attached to the vehicle. Generally this vehicle plies in Old Delhi. The other common vehicle is the motor-cycle rickshaw. In Delhi it is known by the popular term *putt-putta*. Four passengers besides the driver can travel in it. The driver has a seat separate from the carriage. This vehicle is faster and can be hired at a cheaper rate than the taxi-cab. Taxicabs are available, of course; but the hiring charges are not so low as in Bombay or in Calcutta. They will be mentioned in the section: Travel to Work. The other types of passenger vehicles are the motor buses and the tram cars. Buses are single-decked vehicles and carry, on an average, about 35 passengers. The tram cars in the city are bedraggled vehicles. They carry about 40 passengers and run along the main thoroughfares in the city.

TABLE XVI
VEHICLES ON ROADS IN THE CITY

Year	Cycles	Tongas	Motor cycles	Lorries	Taxis, Motor cycle rickshaws	Buses	Cars	Trams	Total
1949	...	...	2,109	1,307	196	390	6,856	...	10,858
1950	...	...	2,423	1,473	351	440	7,126	...	11,813
1951	...	...	2,486	1,510	561	494	7,404	...	12,455
1952	...	...	2,502	1,709	684	582	7,582	...	12,989
1953	71,097	...	2,843	2,021	952	627	7,945	...	14,288 a
1954	75,444	...	2,943	1,968	968	731	8,307	26	14,917 b

a&b — Number of cycles not added.

In the table given above, the total number of vehicles plied on the roads of Delhi for each year from 1949 to 1954 are indicated. The total figures of cycles and *tongas* which plied on the city roads are not available. The figures given in the column for cycles are only of those which were on roads in Old Delhi. However, on the basis of the figures given above a general picture of the situation can be easily formed. From these data it is quite evident that there has been a rapid increase in the number of buses and taxis and cycle rickshaws used in the city. In other types of vehicles too, there is a considerable increase.

When the figures for each type of vehicles are taken separately we note that cycles lead in the list. Within the administrative area of Old Delhi Municipality there is one cycle for every twelve persons. Next to cycles stand the private cars. There is one private car for every 172 persons, one hiring motor vehicle for about 1,480 persons and one bus for nearly 2,000 persons of the population. If we compare these figures with those of the cities in the West, we note that Delhi's position is very backward. For example, in the year 1926 there was one car for every 10.8 persons in New York City¹ and their estimate for 1935 was one car for six persons. Similarly, in the beginning of 1940's Los Angeles had one car registered for every 2.4 residents.² All these comparisons of figures show that Delhi's passenger-carrying vehicles are generally inadequate to serve the total population.

¹ *Regional Survey of New York and Environs*, Vol. III, p. 49.

² E. D. Simon, *op. cit.*, p. 143.

Out of the total number of buses given in the table 264 buses are State-owned and they serve mainly within the city limits. The others are private buses and they run between the city and the suburban towns.

ORIGIN, DESTINATION AND NATURE OF LOCAL TRAFFIC

A large number of people in Delhi City have to travel from their place of residence to the place of work. The major places of work in the city are generally concentrated in different localities. For instance, first, there is the principal business and commercial district located within the Old City walls and the secondary centre in Connaught Place in New Delhi; secondly, there is the industrial area spreading from Subzimandi to Moti Nagar along Najafgarh Road; and lastly, there are the administrative, or political areas located in two centres, viz. one group in Civil Lines and the other in and round about the Central Secretariat in New Delhi.¹ In order to reach such places of work, people use more or less common traffic routes leading to those areas in the city. Some of the main traffic routes which we are going to describe below are traced from the main residential areas in the city.

All the traffic coming from the residential localities, such as East Patel Nagar, Rajendra Nagar and Dev Nagar on the west get concentrated at Gurudwara Road junction, runs along Arya Samaj Road upto Faiz Road at the foot of the ridge and then crosses the ridge from two points and meets again at the Bhangi Colony on the other side of the ridge. From Bhangi Colony this traffic leading towards the east and the south gets distributed into two routes. The heaviest traffic goes through Panchqua Road and enters Connaught Place from the north. The other traffic follows Reading Road and enters Peshwa Road near Birla Mandir. It passes through Peshwa Road and at Cole Market, one section gets separated and runs through Baird Road towards the Central Secretariat, and the other section follows Lady Hardinge Avenue and enters Connaught Place.

At Connaught Place this traffic again gets distributed into

¹ One striking difference between these two areas is that in Old Delhi the residential place is mostly connected with the business place while in New Delhi those two places are separate. The former is a common feature in most of the oriental cities.

two sections. One section goes to the administrative area and the other goes to the business centre in Old Delhi. The former section goes along Parliament Street or Irwin Road and terminates at the Central Secretariat. The latter section joins the other traffic running that way and passes Connaught Place from the north-east. It enters Minto Road, runs for a short distance and enters Thomson Road to run upto Kamala Market. At Kamala Market this traffic gets distributed again into two sections. One section, heading towards the wholesale grain market and the railway station, enters the area through Ajmeri Gate and goes along C. B. Road. The other section heading towards Daryaganj, Kashmeri Gate and Chandni Chowk, follows the Circular Road and enters the area through Delhi Gate. From Delhi Gate it follows Faiz Bazar-Elgin Road and terminates either at Chandni Chowk or proceeds upto Kashmeri Gate. From there another section goes along Alipore Road upto Kingsway Camp. Some traffic of this section stops near Old Hill Road, some at the Secretariat and the others at the University.

From the residential areas in the south and south-east of the city, there are three traffic routes converging on the administrative areas and commercial centres in the city. One comes along Qutab Road. It passes Vinaya Nagar and gets separated into two sections. One section enters Tughlak Road. From there, it goes through Hastings Road and terminates at the Secretariat. The other section goes along Prithviraj Road upto Supply House. From there it takes a turn to the north, crosses India Gate and enters Curzon Road, to run direct to Connaught Place. Another section of that traffic terminates at Connaught Place and the other section proceeds towards Old Delhi. There is one more section of traffic coming from Lodi Colony. It is mainly a bicycle traffic. It passes Man Nagar, runs along Humayun Road, passes the Supply House, India Gate and enters Curzon Road. Much of this traffic terminates in places between the Supply House and the Y.W.C.A. Hostel. The last division of the local traffic to the administrative area from the south consists of two sections. One section comes from Okhala and the other from Lajput Nagar. They meet at Jangpura and follow the Mathura Road upto Purana Kila and enter India Gate area through Corn-

wallis-Wellesley Road. This traffic terminates from the administrative area.

There is traffic going from Old Delhi to the administrative area in New Delhi. It takes its exit through two places : one section from Ajmeri Gate and the other section from Delhi Gate. All those coming from G. B. Road and Hauz Khaz Road are included in the first section. It takes its exit from Ajmeri Gate and follows Minto Road upto Connaught Place. From there it joins the other traffic heading towards the administrative area, goes either through Irwin Road or Parliament Street or Queensway and gets distributed in the administrative area. The second section consists of all those coming along Elgin-Faiz Bazar Road. It takes its exit from Delhi Gate, follows Circular Road, joins the other traffic in Minto Road and continues together upto Connaught Place. From there, they too get distributed into three roads mentioned above and terminate in the administrative area. This traffic to the administrative area mostly consists of cars, cycles, buses, motor cycles and *tongas*.

Traffic bound for the Delhi State administrative area, located in Civil Lines, flows in from two routes. One heavy traffic goes along Lothian Road, crosses Kashmeri Gate and after entering Alipore Road, it runs upto the Old Secretariat. The other comes from the west through the Mutiny Memorial Road, Roshanara Garden Road crossing Kamala Nagar at two places. From there it goes through the University Road, enters the Mall, runs for a short distance and joins the traffic coming from the Kingsway Camp. It terminates at the Old Secretariat or at Rajpur Road where some of the State Departments are located. This group mainly consists of cycles, buses and *tongas*.

The second group of local traffic runs to the commercial areas in Old Delhi. The main commercial district is broadly bounded by Kashmeri Gate area on the north, the Fort and Darya Ganj areas on the east, Chowri Bazar Road on the south and G. B. Naya Bazar Road on the west. There are five main routes through which divisions of heavy traffic flow into the main business and commercial district above. They are the heaviest as the regional traffic too join them to rush into the main centre. The origin and the nature of this traffic are as described below.

All the traffic coming from the Cantonment and the Western Extension area passes either through the Lady Harding Avenue or through the Panchqua Road and enters Connaught Place from the north-west. From there it joins the commercial traffic coming from Curzon Road, Queensway, Parliament Road and Irwin Road and runs upto Kamala Market along the Minto-Thompson Road. There it joins another traffic section coming from the west through Original Road and gets distributed again into two separate routes. One goes along the Circular Road and enters Old Delhi through Delhi Gate. The other enters through Ajmeri Gate and runs again through two routes. One goes along G. B. Road towards the wholesale grain market at Naya Bazar and the other goes through Hauz Khaz Road to enter Chowri Bazar or Lal Qua. All this traffic consists of buses, lorries, cycles, *tongas*, motor-cycle rickshaws etc.

A second division of heavy traffic flows into the commercial area from the west. All those coming from Najafgarh and also from the New Industrial Area meet the regional traffic coming through Rohtak, Bahadurgarh and Shakurbasti at the Zakhira. It runs along the New Rohtak Road and gets separated into two sections at the East Park Road junction. One section follows East Park Road, passes Model Basti and runs through Bahadurgarh Road or Sadar Bazar Road. They meet at the Kutab Road again and enters the business and commercial area through Lahori Gate junction. The other section continues the run along the New Rohtak Road, crosses the ridge and follows the Original Road upto Ajmeri Gate. It joins the New Delhi traffic bound for the commercial areas. This traffic largely consists of buses, lorries and cycles.

A third division of heavy traffic flows into the business and commercial district from Subzimandi. All the regional traffic coming from towns like Karnal, Panipat, Sonapat too, joins this local traffic at Subzimandi. This traffic comes along the G. T. Road. It passes the Birla Mills, the Clock Tower, and the Ice Factory and gets separated at the Tis Hazari Bridge. One goes through Teliwara, joins the other traffic coming from Bahadurgarh and Sadar Bazar Road at Kutab Road and enters the commercial district through Lahori Gate. The other runs a short distance through Hamilton Road, crosses the Dufferin Bridge and

enters Queen's Road which runs across the commercial area. This traffic mainly consists of omnibuses, trams, lorries, *tongas*, wooden carts and cycles.

The fourth division of heavy traffic comes from the east. It comes over the Jamuna river. All the regional traffic from Meerut, Garhmuktheshwar and also from Bulandshahr joins the local traffic which starts from Ghaziabad and Shahadara and runs along the highway upto Jamuna river. It crosses over the bridge and enters the main commercial centre from the east. This traffic consists of buses, cars, *tongas*, motor cycles, motor-cycle rickshaws, cycles and lorries.

The fifth division of heavy traffic to the commercial area comes from places like Purana Kila, Nizamuddin and Okhala in the south. It follows the Delhi-Mathura highway and enters the city through Delhi Gate. This traffic consists of buses, lorries, cars, cycles and carts.

The third group of heavy local traffic flows into the industrial areas in the north-west. These areas lie in the city periphery. They begin from Subzimandi and stretch along the Najafgarh Road upto Moti Nagar. The local traffic flows into these areas through five main routes. One division of traffic runs from New Delhi area. It goes through Chelmsford Avenue, enters Kutab Road and runs along it upto Bahadurgarh Road. There it gets distributed into two sections. One continues the journey through Bahadurgarh Road and enters Subzimandi through Bara Hindu Rao. The other continues the journey through Grand Trunk Road and gets separated in Subzimandi. Another division of traffic from New Delhi follows Panchqua Road upto the Ridge and gets distributed into two sections. One section goes to Subzimandi through the M. M. Road and the other follows the New Rohtak Road and terminates in the New Industrial Area. The industrial traffic from Old Delhi residential localities runs through Lahori Gate, crosses the railway bridge and enters Kutab Road at the Sadar Bazar Road junction. It joins the other traffic from New Delhi and enters Subzimandi area through Bahadurgarh Road or G. T. Road. Another section comes from the Western Extension area. It runs through East Park Road, passes Model Basti and gets distributed either at D. C. M. Mill area or on the other side of Phul Bangash. Still

one more section of traffic comes along Najafgarh Road, passes Moti Nagar and gets distributed at the New Industrial Area or follows the New Rohtak Road upto East Park Road. It joins the other traffic going through East Park Road and enters Subzi-mandi. This traffic mostly consists of lorries, cycles and motor vans.

CONCENTRATION IN THE CENTRAL AREA

It was stated in the foregoing sections that the area within the walls of the Old City contains the central business and commercial district in Delhi. A study of this area in detail reveals that there are different sections specialized for different types of business. For instance in Naya Bazar there is an area well-known for its wholesale dealers in wheat, gram, and condiments such as chillies, onions and pepper. It is located by the railway yards. Similarly, there is Sadar Bazar market well-known for its wholesale dealers in cloth and hosiery goods. Next to that in Subzimandi is the wholesale market of vegetables and fruits. On the northern part beyond the Central Station are the dealers in motor cars and accessories. Chowri Bazar is well-known for its market in kitchenware utensils and stationery.

Of all these areas Chandni Chowk is well-known for all types of business and commerce. It can be termed the hub of Delhi and its environs for various reasons. The offices of commercial banks, insurance companies and of other agencies are situated here. Dealers in wholesale as well as in retail goods like textile, woollen and other millinery goods, paints, jewellery are found in plenty. Similarly, it is the cultural centre of the city too. Along this street are found several popular cinema houses. A quarter of a mile away to its south lies the well-known Jama Masjid mosque which is the religious centre of all the Muslims in Delhi. Hundred yards away from its eastern entrance is the historic Red Fort. Just at the eastern entrance is situated the Red Jain Temple and mid-way between the east and west entrances lies the Gurudwara of Sisganj which is the worshipping centre of the Sikhs. At the western end is the Fatehpuri Masjid. A quarter of a mile away to its north is the Central Railway Station. In between them is the Queen's Park. The two biggest

public libraries are situated in this locality and on the southern edge of this part lies Delhi's civic centre too.

We observed that the features described above has a stronger pull of traffic, local and regional, to this place than to any other functional area in the city. Hence we made a detailed study of the traffic movement in the area. As a preliminary step in working out the method of research we took a count of the peak-hour traffic flow on a working day. Our guiding question for the study was: What portion of the peak hour vehicular traffic enters and accumulates in this space at a particular time on a normal day? Our set time for counts was between 9-30 and 10-30 A.M. From the local omnibus and tram time-tables we noted that the highest frequency of services into the area is between the hours noted above. We further observed that the real business in the whole area also begins after 10 A.M.

From general observations before the counts were made, we noted that Chandni Chowk has only four major entrances through which a very high volume of traffic flows in. Those entrances are: (1) the eastern entrance on the Red Fort side, (2) the western entrance from the Fatehpuri Masjid side, (3) the northern entrance from the north-east corner of Queen's Park, i.e., from the Railway Station East End and (4) the Railway Station West End sides. In our study the counts of all vehicles were made from the first three entrances and only the omnibuses, trucks and lorries were counted at the fourth point as those heavy vehicles bound for the area terminated there. Only the smaller vehicles passing through this entrance also had to pass through either the second or the third entrance. Hence they were not counted at the fourth entrance.

The traffic counts were made on a Wednesday in November 1954.¹ Our findings are summarized below:—

From the table below we find that the highest flow occurs through the Red Fort End entrance. The reason for this is not

¹ I am indebted to Messrs. R. Lal, K. Agarwala and M. K. Chaddha of Karol Bagh for the aid rendered me in carrying out the counts.

TABLE XVII

FLOW OF VEHICULAR TRAFFIC TO CHANDNI CHOWK

Type of vehicle	Red Fort End	Railway Station East End	Fatepuri End	R. S. West End	Total
Bicycles.....	672	542	406	...	1620
Motor bicycles	28	10	1	...	39
Buses.....	17	37	...	16	70
Motor vans...	12	27	...	...	39
Lorries.....	8	11	...	4	23
Motor cars...	126	44	3	...	173
Motor cycle rickshaws...	69	48	1	...	118
Tricycle rickshaws...	61	128	16	...	205
Tongas.....	69	109	14	...	192
Thelas and other carts..	17	77	43	...	137
Trams.....	...	...	13	...	13
Total.....	1,079	1,033	497	20	2,629

far to seek. All the vehicular traffic such as buses, cars and motor-cycle rickshaws coming from New Delhi and other neighbouring areas runs along Elgin Road and enters through this end. Elgin Road is not so congested and all the traffic bound for Chandni Chowk entering through the Delhi Gate prefers to follow this route. On the other hand, all the local traffic, mostly buses, coming through Jamuna Bridge Road and also from Kashmeri Gate area in the north enters from this end. The Railway Station East End ranks second amongst all. The reason is that this end is the terminating station of all the regional omnibus services from the east and it also acts as an entrance for light vehicular traffic coming from the same direction. In addition, all those vehicles carrying passengers to Chandni Chowk from the railway station and also from Queen's Road enter through this end. A very small number of light vehicles like cycles and tongas coming from the station pass through Queen's Park. We could not include them in our counts. The Fatehpuri entrance ranks third in the list of vehicles entering into this area. But the number of vehicles entering is comparatively low. It acts as an outlet for the traffic going towards Naya Bazar, Khari

Baoli, Sadar Bazar etc. Only a large number of *theilas* and cycles enter from this end. All the regional lorries and buses coming to the central area terminate at the Railway Station West End and from there the passengers travel in cycle rickshaws, *tongas* or walk to the central area. The distance from this bus terminus to Chandni Chowk is only a quarter of a mile.

A study of the different types of vehicles entering into the area shows that cycles number the largest group. Tricycle-rickshaws and *tongas* rank second, motor cars rank third and buses, fourth.

If we take an estimate of the approximate number of people entering the area in vehicles we find that omnibuses carry the largest number. The daily frequency of local omnibus services into this central area is 487 trips. They carry about 15,000 persons daily. In addition to these services there are the regional omnibus services having a daily frequency of 350 trips.

Now the question we have to answer is this: Where do all these vehicles and people get accumulated? What is the area of space occupied by the peak-hour population? The central region of the business district called Chandni Chowk constitutes about 220 acres in gross area approximately. It has a population of about 76,000 people who can be called night-time-sleepers.¹ During day time we note that the population occupying the same space get swollen to high proportions. According to our estimates this resident population increases by about 6,200 persons during the peak hour alone.² It means that the accumulation of persons within the central area during the peak hour amounts to about 9% of the total population in the area. As a result of this accumulation the gross density of the area increases from 345 persons per acre to 375 within the peak hour. Besides these there are about 2,600 vehicles getting accumulated within the same space during the same hour.

We observe that upto two o'clock in the afternoon this cen-

1 The following municipal constituencies are included here: Chandni Chowk, Katra Neel, Shradanand Bazar and Jama Masjid.

2 To estimate the approximate number of people who arrived into the central area we based our calculations on the following counts per vehicle: Cycle 1; motor bicycle 1; buses 30; motor vans 2; lorries 2; cars 3; motor-cycle rickshaws 3; tricycles 2; *tongas* 3; *theilas* 1; and trams 30.

tal area becomes very much overcrowded with people and vehicular traffic. In Chandni Chowk there are no special parking spaces for vehicles. The cars, *tongas*, cycles and *thelas* use the sides of the street for parking, leaving only the middle of the road for moving vehicles. The pavements in most shop-fronts in Chandni Chowk are no more than six to eight feet wide. Near Fatehpuri Masjid it widens to about 15 feet. These pavements become densely congested when stray cattle and the moving hawkers block the pavements.

The inflow of population into the central area continues with less intensity till about two o'clock in the afternoon and from then onwards, it gradually goes down and reaches very low levels at about nine o'clock when the last group of shops close down for the day and the last show in cinema houses in the area begins.

THROUGH TRAFFIC IN NEW DELHI

One of the important points which we did not describe in detail earlier is the internal traffic movement in New Delhi. This traffic moves in a different pattern. It mainly operates outside of the central business and commercial district and is mostly confined to the area within the city limits.

New Delhi has its own hub called the Connaught Place. It is mainly a retail business centre for New Delhi. Situated here are some of the branches of important banks, insurance companies and also the agencies of a few commercial firms. In addition there are a few cinema theatres, some well-known newspaper offices and also some upper class residential hotels.

Connaught Place has inner and outer ring roads. Between these two roads there is a smaller one running in a horse-shoe pattern. The inner ring-road and the area within it is called the Connaught Place. The centre of this ring is laid out as a garden with some fine shady trees and a bandstand as its central feature. The outer ring-road is called the Connaught Circus. This road is 160 feet wide and on either side of the vehicular path are the wide pavements used as parking spaces. These pavements are about 15-20 feet wide each. For the shoppers there are long circular arcaded pavements running in front of the shops. There are nine main roads which radiate in all directions



Tonga is another popular vehicle.

(b)



The main street running through Regharpura, Qarol Bagh.



Roshanara Garden laid out by Shahajahan, is one of the biggest parks located on the border of the industrial area in Subzimendi. The lake in the centre where filth accumulates now can be cleaned and developed into a boating tank.

(b)



A sports meet at the New Delhi Stadium.

from the outer ring. They are connected with the inner ring road by crossways. These roads are all straight; very wide and well-paved; and these have already been described in an earlier section.

Connaught Circus occupies more or less a central position between the commercial and residential districts on one side and the administrative and residential districts on the other. Therefore the traffic going from one side of the city to the other passes Connaught Circus. About one-third of this traffic actually terminates at Connaught Place.

The morning traffic which runs through this centre is mainly commercial and administrative and consists of people reaching their destination on cycles, in buses, in motor cars and in motor-cycle rickshaws. The peak-hour of the traffic flow through this area is 9-30 and 10-30 in the morning. In the evening it is between 5-30 and 6-30. This evening traffic is partly residential and partly one out for shopping and recreation.

In order to get an idea of the peak-hour traffic flow through this area we took the traffic counts on an ordinary working day. For counts we chose only four important main streets which run through different functional areas in the city. Those streets were Minto Road, Panch Qua Road, Parliament Street and Curzon Road. Our count posts were at the entrances of each of the said roads to the outer ring road, that is, Connaught Circus. The total figures of our counts are given below.

TABLE XVIII
FLOW OF VEHICULAR TRAFFIC TO CONNAUGHT PLACE

Type	Minto Road	Panch Qua Road	Parliament-Street	Curzon Road	Total
Cycles.....	1,701	1,484	655	699	4,539
Motor Cycles..	48	68	26	28	170
Buses.....	25	16	25	10	76
Motor Vans..	16	9	14	16	55
Lorries.....	15	5	1	4	25
Motor cars...	237	185	174	285	881
Motor cycle rickshaws...	63	40	53	36	192
Tongas.....	97	31	28	30	186
Thelas.....	12	21	7	12	52
Total....	2,214	1,859	982	1,070	6,125

A study of the above figures shows that more than 6,000 vehicles enter Connaught Circus at the peak-hour through the selected four entrances. The largest number of vehicles enter through Minto Road. The reason for this is that it is the main inlet for all the traffic coming from a very wide area including Old Delhi, Civil Lines, and Shahadara. This traffic heads towards the administrative and the commercial areas in New Delhi. The second largest group passes through Panch Qua Road entrance. This traffic comes from the residential areas in the west and north-west of Delhi. Majority of this traffic heads towards the administrative areas in New Delhi. The third largest group passes through Curzon Road. It generally goes towards the commercial areas either in Old Delhi or in New Delhi. The last group enters from Parliament Street. Connaught Place is the termination for some; others proceed towards the main business district in Old Delhi.

From the same counts we note that of all the types of vehicles entering the area, cycles rank first. The largest number of cycles come through Minto Road and Panch Qua Road. The motor cars rank as the second largest group in the list. They enter through Curzon Road and Minto Road. Motor-cycle rickshaws, motor-cycles and *tongas* form the third largest group. The largest group enters through Minto Road. The number of omnibuses entering and going through is generally high. Goods carrying vehicles like motor-vans, lorries and *thelas* entering this area are generally few in number.

Our estimate of the probable number of persons entering Connaught Circus during the peak-hour in the morning exceeds 10,000 persons. This movement of population decreases gradually after 10-30 A.M. and then from 4 P.M. onwards it increases again. It reaches its peak between 5-30 and 6-30 P.M. The reason for this is that many of the workers returning to the residential areas on the west and north go through Connaught Circus and secondly, many people after the day's work visit this place just for recreational purposes or for shopping. Some go to see pictures and some visit dinner-and-dance restaurants.

REGIONAL TRAFFIC MOVEMENT

By regional traffic we mean that traffic which has one termi-

nus in any part of the Metropolitan City and the other terminus outside of the Metropolitan District. Such traffic routes are many and they connect all the important towns and cities lying within a radius of about 180 miles.

The regional traffic in Delhi is mainly a passenger and goods traffic. It is mostly accommodated in public vehicles such as buses, lorries and railways. The regional passenger traffic can be grouped according to the time of the day they arrive. These groups are : the first early morning traffic in which we include those bringing milk, vegetables and also some factory workers going to factories that start work early in the day. This traffic is generally confined to the railways only. The second, the late-morning group of passenger traffic, arrives between 9-30 and 10-30 A.M. This includes all those who are working in offices and commercial firms. The third, the mid-day, group of traffic arrives after 10-30 A.M. It is mainly a shopping and business traffic. In the evening there is one passenger traffic arriving at the time of entertainments. But this is not so significant as Delhi's evening regional passenger traffic is mainly an outgoing one.

In Delhi a study of regional omnibus traffic is very important as it brings a large number of remote towns and villages in the region under its influence.

A study of the passenger omnibus services into the Metropolitan City shows that there is one omnibus in every three minutes either going out or coming into the city from different parts of the outer regions. Generally in this movement of traffic the inflow increases at the busiest hours of the day, that is, between 9 and 11 A.M. and the outflow increases between 4 and 5 P.M.

Figure 9 shows the frequency of regional omnibus services on different routes radiating out of the city. The distribution of routes and frequencies shows an octopus pattern. The highest frequency of regular daily passenger bus services operates between Ghaziabad and Delhi. It is because of the fact that Ghaziabad is the junction of three main regional bus routes. One route going to Meerut, Haridwar and Dehradun, the second going to Hapur and Garhmukteshwar and the third going to Bulandshahr and Aligarh originate from here. About 100 buses run between Delhi and Ghaziabad and about two-thirds of these

ply on the routes mentioned above. An equal number comes into the city too. The second highest frequency of services is from Bahadurgarh town. There are about 80 journeys per day in each direction. The third highest is from Panipat, the fourth from Gurgaon and the fifth from Rohtak. The numbers of frequencies are 53, 45 and 42 respectively. Almost all these towns are district headquarters and they depend mainly on Delhi for business and commerce.

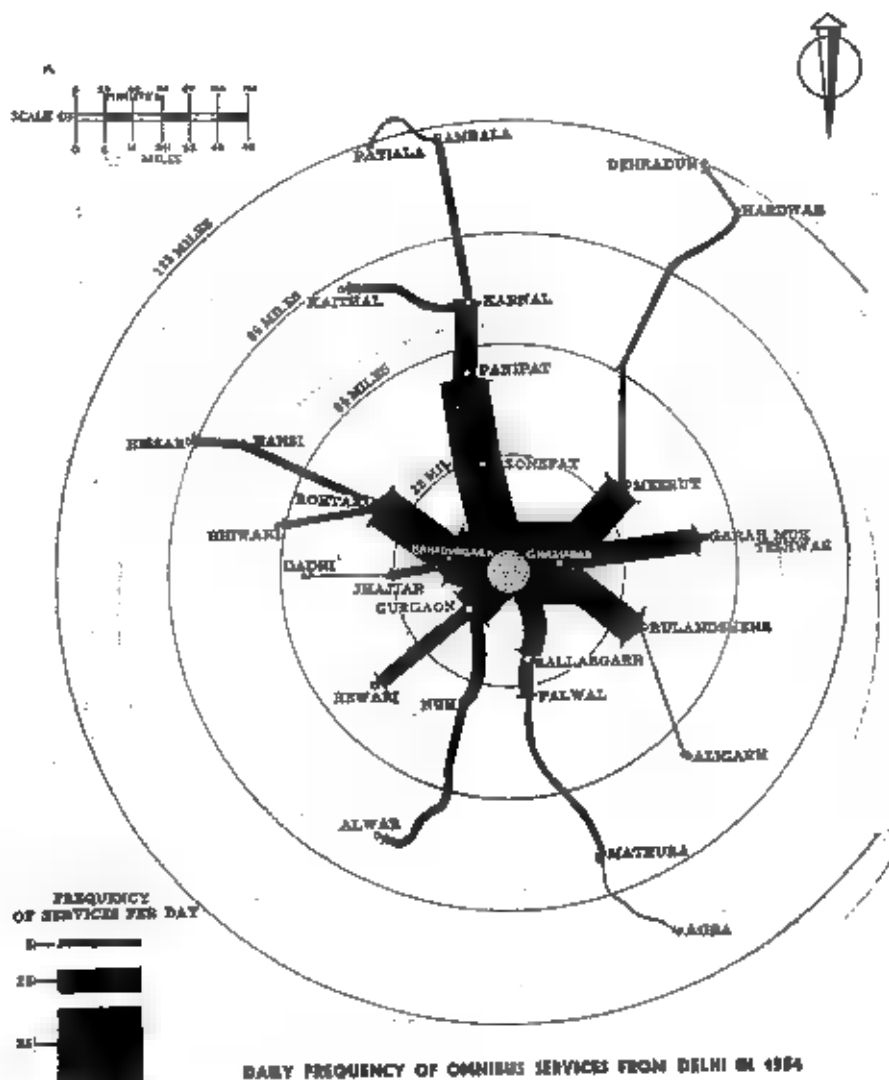
The other important services are those to Karnal and Faridabad in Punjab and Meerut, Hapur and Garhmukteshwar in the United Provinces. There is a frequency of about 25 to 30 services per day in each direction from each of these towns. Some of the important cities lying beyond a radius of 120 miles are also connected with Delhi city by daily omnibus services. Such places are Dehradun, Hardwar, Aligarh, Mathura, Agra, Kalka, Patiala, Chandigarh and Alwar. The frequency of services to and from each of these places varies from three to five services per day.

Almost all the places mentioned above are towns or cities which are linked with Delhi by railways too. But there are some towns which are not directly connected by railway. Examples of such places are Pingwan, Ujjiana, Nagina and Nuh. They are served by direct omnibus services from the city. Jahajjar is served by twelve services, Ujjiana by three, Nagina by three and Nuh by thirteen.

The longest regional omnibus services from Delhi operate to Dehradun in U.P. This is about 165 miles away from the city. The shortest service is to Ghaziabad which is only 12 miles away. It takes nearly six and a half hours to travel extreme distances in the region and 40 minutes for the shortest.

The bus services in different regional routes are assigned to different private companies. Many of these companies have headquarters established in Delhi. There are a few inter-province omnibus services run by different State Transport Authorities.

The internal traffic termini of different regional bus services are located in four places not far away from the central railway station and also from the central business district. They



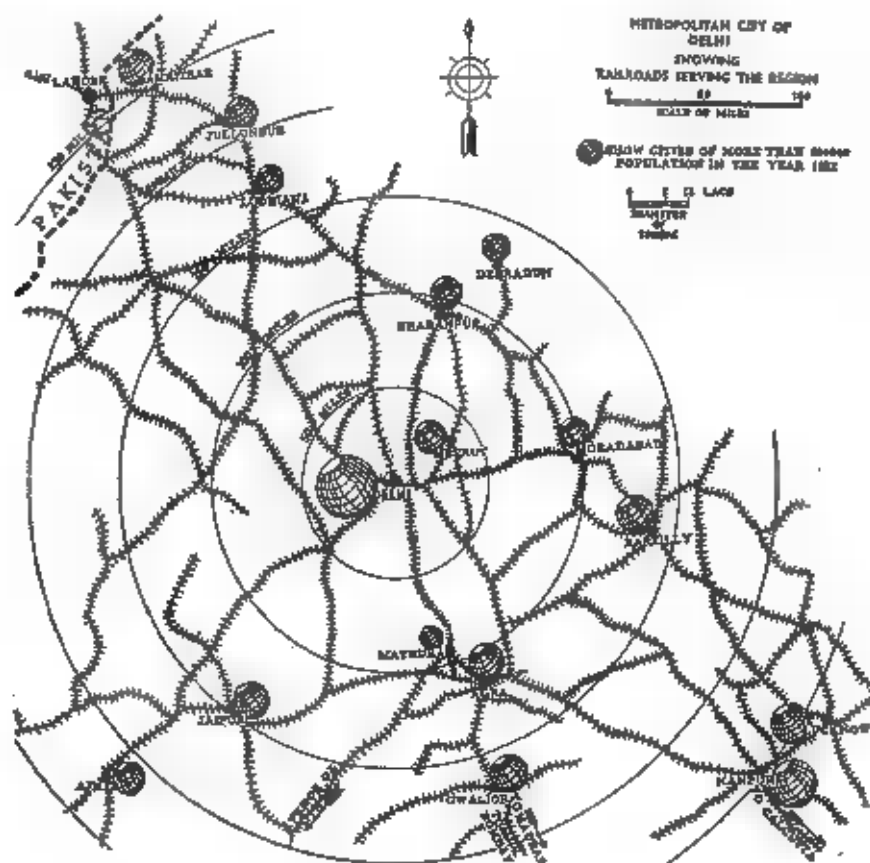


Figure 10

are: Delhi Station West End, Delhi Station East End, Teliwara in Sadar Bazar and Ajmeri Gate.

Side by side with the passenger traffic service runs a regional goods traffic service too. The goods traffic service depends largely on the railways. However, there is a considerable amount of lorry traffic too. Lorries are mainly used to transport goods to villages and towns that are not connected by railways.

An important transport facility which the City of Delhi lacked upto recent times was a suburban railway service as in Bombay or in Madras. This was mainly due to the fact that till recently all people in the area lived in a compact unit and there was no regular commuting population from the nearby towns. But now the conditions have completely changed. The suburban areas of the city have developed into full-fledged colonies and the commuting population of the towns lying within a radius of 10 to 15 miles too has increased considerably. In addition, a large portion of the city's daily milk and vegetable supply flows from these areas. At present all supplies of this kind have to depend either on the buses or on the trains coming from distant places. For instance, at present there are about 400 to 500 milk-men waiting daily at Shahadara and Ghaziabad for the early morning 5 o'clock train from Aligarh. The frequency of the railway service is not so high as that of the bus service. The highest frequency of runs between Ghaziabad and Delhi is 22 per day. Faridabad which is a growing industrial town near Delhi is served by only four trains per day.

AIRWAY SYSTEM

An airway system links Delhi with the leading cities of India and of other countries in the world. At present Delhi is the most important airport terminal in Northern India for internal air services and a through centre for external services.

There are two airports, one for civil and the other for military purposes. The civil airport is situated at Palam which is about eight miles to the south-west of Old Delhi.

At present there are eight internal air routes and five external ones which converge on Delhi. From distant cities like Madras, Delhi can be reached by air in six hours, from Lahore

in one hour and forty minutes and from Srinagar in about four hours.

DISTANCE, TIME AND COST OF THE DAILY JOURNEY

Before the introduction of good communication lines to Delhi in the beginning of the 20th century, the inhabitants in the city lived in more or less a compact unit and they mostly combined the working place with the living. However, with the improvement of the transport system, growth of industries and specialization of certain areas for different functions, the commuting distance of the inhabitants began to increase gradually.

Today we see thousands of people proceeding from their homes to distant parts of the city in connection with their work. It looks as if there is no pattern in their travel, but closer observation clearly shows that there is a definite pattern in the travel from one residential part of the city to another part. This travel is undertaken for different purposes. In the morning a large group travels towards the administrative, industrial or business areas and in the evening they proceed in the reverse direction, all of them travelling back to the residential areas. Then there is another group travelling towards the shopping and the recreational centres in the evening. We shall now proceed to study these to and fro journeys with respect to distance, time and cost.

In Delhi there are three major occasions for travel. They are: work, shopping and recreation. They are an essential feature of present Delhi's social structure, economic requirements and a consequence of its topography. Out of the three types of travel the most important type is the one in connection with work. It is for work either in a factory, or in a commercial firm or in a government department. As we have shown in the chapter on Industries, the two cities, Old Delhi and New Delhi, are characterised by specialization in three different functions, the former in business and industries and the latter in administrative purposes. These specializations have a bearing on the daily travel of persons proceeding to work. In Old Delhi many people travel to work in industries whether large or small or in the commercial firms and shops located in the main business district. But in New Delhi many travel to work in government

offices. This does not mean that there are no other persons travelling from one specialized area to the other. There are. But the majority of the people travel to work in these specialized areas.

If we study the areas separately, we note that the residences of a large number of white-collar workers, attached to the administrative offices in New Delhi, are situated beyond a radius of about three-fourth of a mile from the offices. The distance between home and office stretches upto a radial distance of about four miles. Therefore the mode of travel to these offices always vary. The mode of travel also depends on a person's executive position. That is, for example, an officer staying even half a mile away will travel to his office in a car but a clerk will cover the same distance either by walking or by a bicycle.

Today, because of the peculiar spatial planning of New Delhi city majority of the middle class office workers are compelled to live beyond a radial distance of about a mile from their offices.¹ For their daily journey to work they use either a cycle or a bus. Travel by car or taxi is not a feasible proposition for the majority as it is costly. Only a few officers travel thus. Some do bus travel but many man hours are lost on the way because of overcrowding and low frequency of service to these areas even at the peak hour.

The time taken to travel from home to office varies. It depends on the vehicle used and also on the topography of the land. On an average, a person residing beyond the radius of one mile takes more than twenty minutes to reach the office. For detailed study let us select a residential neighbourhood in the west. Consider Qarol Bagh. More than fifty per cent of the adult male residents in Qarol Bagh are employed in government departments housed in buildings round about the Central Secretariat. About half of these persons use cycles to reach their destination as it is a cheap means of transport and the other half travel in buses. The other fifty per cent travel either in motor cycle rickshaws, cars, motor cycles or in taxis. The distance from Qarol Bagh to the Central Secretariat area is between two and three-fourths to three miles. The duration of

¹ Low paid white-collar workers' residences lie farther away from the Secretariat than those of the officers.

travel for a resident from the area is nearly forty-five minutes to an hour. This includes seven to ten minutes' walk to the bus-stand at Gurudwara Road, fifteen to twenty minutes' stay at the bus-stand, twenty to twenty-five minutes travel in the bus and five minutes walk from the nearest bus-stand to the office. A cyclist takes about twenty to twenty-five minutes to travel the same distance.

The cost of travel, excluding energy cost,¹ for a trip from Gurudwara Road to the Secretariat, is three annas by bus.² This is slightly over Rs. 10 per month, which is a considerable sum to the white-collar worker residing in Qarol Bagh and, it has now become an important item in the family budget of the low-paid worker. However, about Rs. 3-8 to Rs. 4-8 out of this amount can be saved by a resident occupying a government quarter in Gole Market area. From Lodi Colony in the south the time taken to travel by bus to the Secretariat is about 30 minutes and costs three annas per single journey. From Lajpat Nagar in the south this journey requires nearly one hour—counting travel time only—and costs five annas. From the Cantonment as well as from Old Delhi there are a large number of persons travelling either by bus or by cycle. From the Cantonment it takes about 45 minutes by bus and costs annas five and from Old Delhi it is almost 30 minutes' travel and costs annas three.³ The frequency of bus services from Old Delhi to the administrative area is high and a person does not have to wait for more than five to eight minutes at a bus-stand.

The other group of persons travels to work in the industrial area in Subzimandi or in the New Industrial Area along Najafgarh Road. Their residences generally lie within a radius of two miles. Those who live within a distance of about one to one and a half miles come by walking or on cycles. A very few of the

1 The strain of travelling is felt by every person. It may affect the respiratory or digestive systems and it is a matter for medical research.

2 The cost of cycling consists mainly in the purchase of a cycle and its expenses for repair and maintenance. The cost of a new cycle ranges from Rs. 185 to Rs. 350. Of course, many use second-hand cycles which brings the range down to between Rs. 140 and Rs. 200. A cycle can be hired on monthly basis too. Hiring rate ranges between Rs. 10 and Rs. 15.

3 These timings are given from the place where a bus starts its journey.

industrial workers travel by bus or train. This number is small because: (1) these transport facilities are comparatively costlier and (2) the buses and trains do not run so frequently in these areas. On an average a worker takes about 20 to 45 minutes to walk to the destination or reach by cycle. Majority of the workers in Birla Mills and in D.C. Mills stay in the quarters provided by the mills and the walking time to reach the mills is about five to ten minutes.

The third group of people travel to work in banks and other commercial firms majority of which are located in the central business district in the old city. The residential areas of these workers lie within a radial distance of about two miles. However, there is a group of long distant commuters too. For instance about 5,000 persons commute from Shahadara every day. They travel either by bus, train or by cycles. The one way distance from Shahadara to Delhi is about four miles. The time taken to travel by bus is about 45 minutes. This time includes the average time taken to walk from home to the bus stand, waiting time at the bus stand and also the halting time at the entrance to Jamuna bridge. It costs about three annas per single journey in a bus.

The second major occasion for travelling is at the time of shopping. People in Delhi make purchases at two distinct places. One is the local shop and the other is the central market. The frequency of travelling to these two areas varies. Local shopping is done every day by the husband in the morning and the wife or both together in the evening. The local shopping area in most of the localities is generally found within a radius of half a mile from the residence. Of course, in some areas as in India Gate or Talkatora Garden, this distance is more than half a mile. Goods such as curry-stuff, vegetables or other commodities which are required for immediate use are purchased from the local shopping centre. People either walk or go on cycles to these centres. This travel does not cost them much. The average time taken to walk is about 10 to 15 minutes.

In Delhi there are two central market shopping areas. They are Connaught Place in New Delhi and Chandni Chowk in Old Delhi. Generally people travel to these areas for shopping once a fortnight or once a month only. They lie within a radius of

five miles from the main residential areas in the west, south and north. When on a shopping trip to these areas people travel by bus or by motor-cycle rickshaw. A single trip costs between four to five annas. For instance from Gurudwara Road to Connaught Place a bus charges two and a half annas and a motor-cycle rickshaw charges four annas. From the same place to Chandni Chowk a bus charges four annas and a motor-cycle rickshaw charges six annas. The fares of the motor-cycle rickshaw are fixed by municipal regulations. But still their fares fluctuate with the hour of need. On the shortest route from Gurudwara Road to Chandni Chowk a bus takes about half an hour's travelling time and a motor-cycle rickshaw only 20 minutes.

People, of course, travel for recreation. This is the third reason for travel. Delhi people go out to see pictures, visit places of historic importance or go on picnics. Some of the informants told us that because of the high cost of travelling, they cannot take part in these leisure-time activities regularly. Many travel once a fortnight or once a month to see a picture and once in about three months on a picnic to the historic sites. When they travel to these places they travel either by bus, or motor-cycle rickshaw or in a bullock cart. Cinema theatres, historic sites or picnic spots are located not far away from the major residential areas in the city. For instance, the residents of Qarol Bagh have to go either to Connaught Place, to Paharganj, to Subzimandi or to Chandni Chowk to see a picture. They are located at a distance of two miles, one mile, two miles and four miles respectively. A single bus trip costs two and a half annas to Connaught Place, one anna to Paharganj, two annas to Subzimandi and four annas to Chandni Chowk. The bus services to Subzimandi are run at an interval of half an hour. Hence many have to travel by tonga or by motor-cycle rickshaw to reach the cinema houses earlier. There is not a single cinema theatre within a radius of three miles from Lodi Colony in the south. The residents visit Connaught Place whenever they wish to see a picture.

The historic sites lie beyond a radial distance of about four miles when measured from the northern or the western residential areas. For those who reside in the south they are not far off. All visitors travel to these spots either by buses or by motor

cycle rickshaws. The low-income groups find cheaper to travel in cliques in bullock carts. A single bus trip to places like Kutab Minar, Red Fort or Okhala costs eight annas.

Besides these local travel, there is regional travel too. People travel to the city from regional places either for official work, for business, for shopping or to visit friends or relatives. Regional travel is generally done by buses, railways or by cars. Car travel is a luxury only a few can afford but many travel by buses or by railways. The duration of the journey in the regional bus services generally depends on the condition of the road and its congestion. The longest single bus journey, which is to Dehradun 165 miles away in the north, takes about six to six and a half travelling hours. A single journey to Agra lying 132 miles away takes about six travelling hours. A man who boards a bus at 6-30 A.M. from Kaithal 114 miles away, reaches Delhi at 11-30 A.M. After doing four hours' work in the city he can return home at about 10 P.M. One way trip costs him only Rs. 4-2. Similarly, another distance of 104 miles, that is from Alwar to Delhi, can be travelled in five hours and costs only Rs. 3-4. Nearer places like Ghaziabad can be reached in 40 minutes by bus and costs only seven annas. Gurgaon to Delhi is only 21 miles and a bus covers this distance in one hour. A trip costs only 12 annas. The costs of travel by bus to other regional places are proportionate to these. The average travel cost per mile falls to about seven pies.

Railway travel is faster and cheaper; but the railway service is not as frequent as that of the bus. An express train running from Agra to Delhi covers the distance of 132 miles in three and a half hours and an ordinary passenger train, which stops at every station, takes nearly five and a half hours to cover the same distance.

CHAPTER VII

LEISURE AND RECREATION

LEISURE TIME

For our study we define leisure-time as all that time of a day when a person is not sleeping, eating or working; and recreation as the form of activity that is pursued during this leisure-time. Before proceeding to describe the facilities available in the city for leisure-time activities, we have to note how much time is available for such activities, as the increase in free time mostly results in the demand for recreational facilities. The availability of time for leisure-time activity generally depends on the nature of one's occupation and also on one's economic status.

In Delhi majority of the inhabitants are engaged in three main types of occupational activities: commerce, industries and public services, as has been shown previously. All these activities have exerted great influence on the time that is available for recreation.

On the face of it, it looks as if everyone in the city has his time equitably distributed: eight hours for work, eight hours for sleep and eight hours for recreation. But a closer study of the life of the inhabitants shows that due to lack of adequate neighbourhood amenities and public utility services it is not so. Let us consider the case of an average white-collar worker residing beyond a radial distance of three-fourths of a mile from his place of work as majority of his kind do.¹ On an ordinary working day he spends nearly eight and a half hours for work and travelling to and from his house. The sleeping hours can easily be limited to eight hours, i.e. from 10 P.M. to 6 A.M. Out of the rest, three hours or more are spent for marketing and eating and only about four hours are left as leisure time. The same is the case in the everyday life of a business firm worker too. But in

¹ Those who live in Qarol Bagh, Old Delhi, Lodi Colony, Nizam-muddin etc. have to spend more time for travelling which naturally lessen the time available for recreation.

the case of an industrial worker the leisure-time available is lesser. He has to spend about nine and a half hours for work (this includes travelling time too), eight hours for sleep, four hours for marketing and cooking and only two and a half hours are left as his leisure-time.¹ This decrease in available leisure-time of industrial workers in Delhi is due partly to lack of transport facilities to travel to their place of work and partly to haphazard distribution of different industries in different areas of the city.

On the other hand, the time available for leisure among the people belonging to the upper income group is more than those of the lower group. For example, in Delhi there is the business magnate, the industrialist or the highly paid official who owns a car and has enough money to buy leisure. What the individual in the lower income group, particularly the industrial worker, has to do for himself—e.g. cooking—is obviously attended to by the servants in cases such as this. Consequently he has time for other activities like public work. Low paid worker hardly.

There are also other factors like age, sex, cultural influences, geographical conditions and social situations which usually condition the tone, pitch and the tempo of leisure in the city. These factors would be stated in due course as we proceed with our description of the leisure-time activities.

FACILITIES FOR RECREATION

The provision for public recreational facilities in the City of Delhi is considerable and the purpose of the following sections is to describe, individually, all those falling under different local administrative units and show how far they are adequate enough to meet the public demand. The study of the facilities available within the municipal limits of Old Delhi and New Delhi and the differences in the planned and the unplanned areas will be stated more fully here.

For outdoor recreation in Delhi open spaces are available. These open spaces can be grouped into different categories such as the spaces for playgrounds of children, youths, and adults,

¹ Whenever some workers fail to get enough time to enjoy their leisure, they make use of the time available for sleep.

the spaces for relaxation of adults and elderly persons and the spaces for fresh air.

Open Spaces

Spaces available for fresh air are called open spaces. Open spaces in the city can be separated into two groups. The internal open spaces form one group and the external ones form the other. In Old Delhi two places fall under the first group. One is the Ram Lila ground which spans the area from Kamala Market near Ajmeri Gate to Delhi Gate. This piece of lawn is about three quarters of a mile long and about one and a half furlongs broad. This open land separates the southern part of Old Delhi from New Delhi. Many exhibitions and public meetings are held here. The second inner open space is the one spreading from Daryaganj to Chandni Chowk. It is separated into two parts by Elgin Road. One piece of land lying in front of Jama Masjid is about one furlong broad and about three furlongs long and spreads from King Edward's Park to Red Jaina Mandir. The other, which lies in front of the Red Fort, spreads from Darya Ganj to Jamuna Bridge Road. In some places it is about one and a half furlongs broad and in other places it extends to a distance of about three furlongs. The length of this piece of land is about half a mile.

In Civil Lines area there are two pieces of open space. One is an open lawn spreading from the outer entrance of Kashmeri Gate to Mori Gate. It is about one furlong broad and about two furlongs long. Beyond Mori Gate there is the open ridge spreading in a south-west-north-east direction upto Wazirabad village. The space occupied by this part of the ridge is about 80 feet high, three and a half miles long and three-fourths of a mile broad. It separates the Civil Lines area from congested Subzimandi.

In New Delhi the number of internal open spaces is greater. The biggest open spaces are the ridge, the golf-links and the Kingsway. This part of the ridge spreads from the Idgah near Qarol Bagh to Kitchner Road which links New Delhi with the Cantonment. It is about four miles long and about 80 feet high. Its breadth varies. In some places it is about three-fourths of a mile broad and in other places, specially towards Kitchner Road,

it is about two miles broad. The golf-link space lies beyond the India Gate to the west of Mathura Road. It is about two miles long and about one mile broad. Beyond Lodi Road this area broadens again in the south. The Kingsway space runs down from the Central Secretariat to the Stadium. It is about one and a quarter miles long and about one-fourth of a mile broad. There is a long boating tank in the centre. Fine lawns and rows of trees run to the length and breadth of it. The ridge and some parts of the golf link are covered with thorny trees and tall grass.

The second group, the external open spaces, is one that is formed of those spaces which are found round the periphery of the built-up areas of the city. These open spaces may be called "the green belts" of the modern town planners. On the east and on the north this green belt spreads to a distance of about three miles or more, in the south upto a distance of about five miles, in the south-west to a distance of about six miles and in the west to a distance of about three miles or more. The green belt on the north and on the west mostly consists of beautiful wheat fields. In the east it is full of grassy land. In the south and south-west it consists of non-agricultural land. Moreover it is rugged and rocky. These beautiful green belts, except those in the east, are now being distorted by ribbon development.

Parks

Under the second category of open spaces there are the well-known public parks in the city provided for passive type of recreation.

Within the limits of the Old Delhi Municipality there are five important parks. They are the Queen Victoria Garden (popularly known as the Queen's Garden), King Edward's Park, Ajmal Khan Park, Hayat Baksh Bagh and Roshanara Garden.

Queen Victoria Garden lies between the Old Delhi Railway Station on the north and Chandni Chowk Road on the south. On the west is the Fatehpuri Mosque and C. M. Road and on the east is the Fountain-Station Road. Its total length is about half a mile and the breadth is about three furlongs. Within this park there is one playground for boys and one corner for children. There is a large circular flower-bed at the centre. A

road running from Queen's Road bifurcates at the centre of the park, girdles round the central flower-bed, and enters Chandni Chowk from either side of the Town Hall. *Tongas*, cycles and cycle-rickshaws run through it. On the eastern side there is the Harding Library, a plant nursery, children's corner and a *zanana* (women's) park. On the western side there are flower-beds edged with gravel-paths running in a circular pattern. On the southern side there is a long rectangular-shaped lawn which is being generally used by children for play, by hobos for rest and by gangs for chit-chat. In front of the Town Hall there is a broad lawn intersected by a road leading towards the railway station. These lawns are generally patronised by elderly people for chit-chat in the evening. There are several clubs for volley-ball, tennis and badminton. They are located along the northern boundary of the park. On the western side there is a hut built on a raised circular platform where old people spend their time talking or reading newspapers.

King Edward's Park lies between Elgin Road and Urdu Bazar Road near Darya Ganj. It is more or less triangular in shape and in area it covers about 15 acres of land. There are fine lawns and flower-beds with well-laid gravel paths running in between them. Here there are big shady trees.

Roshanara Garden is the biggest park lying in the heart of the industrial area in Subzimandi. It spreads from Roshanara Garden Road to the end of Roshanara Club. It is about 80 acres in area. There are sandy paths running to the length and breadth of this park. They are edged with rows of big shady trees. The lawns and the paths running round are badly looked after. The hedges are not well-trimmed and tall grass grows in the lawns. One of the beautiful features of this park is a centrally situated small lake with an island in the centre. But it is completely neglected. There is filth accumulated in the corner of the lake and the water looks polluted. Two children's corners, one for boys and the other for girls, are found near the centre. At the northern end of this garden is a small patch of jungle and beyond that lies the Roshanara Garden Club.

The Ajmal Khan Park in Karol Bagh, too, is one of the biggest neighbourhood parks in the city. It lies in front of Tibbia College between the East Park Road and the Ajmal Khan Road.

The area covered by this park is about 24 acres. It is an open park with a few big trees standing mostly along the main foot-paths running across it. At the centre is a circular lawn round which broad foot-paths run. There are four main roads running from the centre to the four directions. On the western side along East Park Road is a children's corner. Next to this is an open lawn for hockey and football. Towards Ajmal Khan Road on the same side lies a flower garden intersected with sandy foot-paths. On the eastern side there is a big plant nursery and also a large strip of grassy plot of land allotted for games like football and cricket.

There is another park within the walls of the Fort called Hayat Baksh Bagh (Life-Giving Garden). Beautiful ancient pavilions and fountains and also broad lawns are found here.

There are two well-known parks in Civil Lines area. They are located just outside the walls of the northern part of the old city. One is Nicholson Park, the other being Qudsia Garden. Nicholson Park lies between Alipore Road and Court Road. It is triangular in shape and covers about 12 acres of land. The ground at the centre of the park is at a slightly higher level. Three fine sandy paths run to the three corners from the centre. On either side of these paths are found well-trimmed lawns and lofty palm trees. Big shady trees are found along the hedges.

Just opposite Nicholson Park lies the well-known Qudsia Garden. Between these two parks runs the Alipore Road. Qudsia Garden is the biggest public park in Civil Lines area. It covers an area of about 60 acres and spreads from Alipore Road to Upper Bela Road. Several tennis-courts are found on the eastern corner and next to them is a big football ground. On either side of a gravel path which runs to the centre are fine lawns dotted with big shady trees here and there. At the centre is an old ruined mosque.

Parks in New Delhi

From a broad point of view, New Delhi looks like a city of gardens and parks. But if we study it in detail, we find that there are only four well-laid public parks. Two of them are bigger than the rest. One of the biggest is the Wellington Park

near Lodi Road and the other is the Talkatora Garden situated near the President's House (Rashtrapati Bhavan). From its north-west side runs the ridge and on the south-west is the Wellington Crescent. It covers nearly 60 acres of land. There is a beautiful cricket ground on one side and a big football or hockey ground on the other side near the ridge. In the centre where the ground is high there are beautiful flower-beds intersected here and there with fine foot-paths. Big shady trees are found everywhere. On the north-eastern corner are several tennis-court maintained by the Talkatora Club.

Wellington park situated near Lodi Road consists of ruined tombs and shady trees. It has the appearance of a natural park. It covers an area of about 50 acres.

Nehru Park lies in the heart of Connaught Place. It is circular and there are fine lawns and flower-beds. There is a band-stand at the centre.

On either side of India Gate there are two large open lawns well-planted with big shady trees. But they lack the appearance of a good well-laid park like the Talkatora Gardens.

The open space at Jantar Mantar too has been turned into a small park recently.

Water-Front Parks

Delhi has only one water-front park and it is located in Okhala just at the mouth of Agra Canal. It lies at a distance of about eight miles to the south of the old city. It is about two miles from the main Delhi-Mathura highway and is well linked with a good motorable road. There is a patch of land, which is almost a jungle, to the south of the mouth of the canal. At the centre of this is a hut where people keep their picnic bags and also do some cooking. There is a weir built right across the river and visitors to the spot are allowed to fish on payment of a small amount as licence fee. Just at the mouth of the canal is a reserved spot for bathing. On holidays and also on Sundays the State Transport buses run to this spot regularly.

Lakes and Rivers for Boating and Bathing

The river Jamuna lies about a mile and half from the main residential areas of the old city, and about two and a half miles

away from New Delhi residential areas. It offers facilities for bathing in places such as Nigambodh Ghat and Qudsia Ghat but not all the time for boating as the water level runs very low through many months of the year.

The only place where boating facilities are offered is the Central Vista Tank along Kingsway. It is kept open to the public every day and a boat can be rented on payment of a nominal fee of eight annas. It is 667 yards long and 80 feet wide. The tank is open to the public from 5-30 to 11-30 A.M. and from 3 to 9 P.M., every day.

Picnic Grounds

Delhi abounds in picnic grounds. Most of them lie on the peripheral areas of the city. Some of the well-known places are Kutab Minar near Mehrauli, Kalkaji, Humayun's Tomb and also other ruined sites in the countryside.

Kutab Minar ground has a beautiful well-kept park where people can go, sit and enjoy a good picnic lunch. Ruined buildings speaking of the glories of ancient capitals lie dotted here and there. In between them are found gravel-paths and shady trees. On Sundays and also on public holidays there is a regular local bus service to this spot.

Humayun's Tomb lies not far away from the Mathura Road. A few furlongs away to the south of that is Saint Nizamuddin Aulia's Tomb. Kalkaji is well-known for the Hindu Temple of Kalka Devi. This spot attracts the largest number of picnickers. In addition to these places there are undeveloped open lands on the periphery of the city which offer attractive possibilities as picnic spots. But we are sorry to point out that some of the ancient sites which formerly were used as picnic spots are now turned into residential localities.

Playgrounds

There are several public playgrounds for children and adults. However, the space provided for such facilities within the Old Delhi Municipality is rather poor. Some playgrounds are included in the parks described above viz. Ajmal Khan Park and Queen's Gardens.

Playground facilities provided for the public in New Delhi

are greater. For example, there is the municipal playground called the Wellington Cricket grounds located in Kotla Firoz Shah near the Delhi Gate. It is spacious enough to accommodate about 10,000 spectators. Just by its side is the municipal football ground. Under the shadow of the old wall outside the Delhi Gate, is another small playground for hockey. Along Lady Harding Road near Connaught Circus there is another fine hockey ground provided with beautiful turf terraces to accommodate spectators. Farther away to the south at the end of Kingsway is the New Delhi Sports Stadium where many of the public sports meetings are held. It is spacious, oval in shape. A series of cemented terraces are provided for spectators. This stadium can accommodate more than 20,000 people. In Talkatora Garden too there are grounds provided for cricket, football and hockey.

Public playgrounds for children are mostly located in parks. There are only a few in residential areas of the city. They are called "children's corners." In Old Delhi there are 11 children's corners maintained by the Municipality. These grounds have to serve a population of about one lakh of five to eleven year old children.

In New Delhi too the public recreational facilities provided for small children are very meagre. They are not more than seven in number. Each of these corners cannot accommodate for play more than 75 children at a particular time. Many children have to play on open strips of lawn in front of houses and some on the school playgrounds. Some of the schools in Old Delhi cannot provide even such facilities to their students. Some have gone as far as to build tents and hold classes on the playground available for school children. The elementary school children at the outskirts have far more convenient access to playing fields but even they have by no means sufficient space for play in terms of present standards. More light will be thrown upon this when we proceed to study the recreational activities of Delhi children.

SEMI-PUBLIC RECREATIONAL AGENCIES

In the Metropolitan City of Delhi there are a considerable number of semi-public recreational agencies such as sports clubs,

social clubs, women's clubs, Y.M.C.A.'s, and dramatic clubs. They are supported by membership fees and donations and they provide a sufficient variety of recreational activities to meet the tastes and interests of all. Their members have a more direct control over the facilities and the type of recreation provided.

Clubs

Clubs in Delhi can be grouped into two categories. There are to be found cosmopolitan clubs and community clubs. Cosmopolitan clubs are those which allow membership to any one irrespective of caste, race or creed. In the community club it is not so. Clubs of this type allow membership only to those who belong to a particular ethnic group and thereby try to foster a sort of fellow-feeling among the members of that particular group living in different parts of the city. Such clubs and their recreational activities are so numerous in the city that it is well-nigh impossible to treat them adequately in a small chapter.

Some of the well-known cosmopolitan clubs in New Delhi are the Chelmsford Club, the Delhi Gymkhana, the Delhi Golf Club and the Talkatora Club. All the members of these clubs except those of the Talkatora Club belong to the upper income-group. The members of the Talkatora Club belong to the middle income-group. In Old Delhi the cosmopolitan clubs are the Roshanara Club, the National Club, the Union Club and the Young Men's Tennis Club. Almost all the members of these clubs except those of Roshanara Club belong to the middle income-group. The members of Roshanara Club come from the upper income-group.

The activities of the Chelmsford Club, located near Parliament building in New Delhi, cover social, cultural and recreational spheres. Its members belong to different castes, ethnic groups and also to different nationalities. By profession many are industrialists, businessmen and government officers. The outdoor games played at this club include tennis, squash, swimming and badminton; the indoor games being billiards, ping-pong and cards. There is a separate reading-room, bar, lounge etc. for its members. Occasionally they arrange ball-room dancing and also open-air cinema shows.

The Delhi Gymkhana Club too provides facilities for out-

door and indoor games. It is located near the Wellington Air Port in New Delhi where many of the Europeans, government and military officers reside.

The Talkatora Club is located near Talkatora Gardens in New Delhi. It is situated in the midst of the middle income-group residential area and is patronised and run by them.

Although it is a cosmopolitan club its membership is restricted to central and state government employees irrespective of caste, creed or nationality. It provides facilities for popular types of indoor and outdoor games. On important occasions it stages dramas too. Majority of its members reside within a radial distance of one mile from the club.

The other cosmopolitan clubs like the Delhi Golf Club, the Delhi Race Club provide facilities only in one kind of major recreational activity.

In Old Delhi the only cosmopolitan club run by the upper income-group is the well-known Roshanara Club. It is located at the farther end of the Roshanara Garden in Subzimandi. It provides facilities for outdoor games like hockey, football, cricket and tennis and also for indoor games like billiards, cards, and chess. Occasionally, it organizes exhibitions and also inter-club matches. It has beautiful lawns for cricket and football.

Most of the middle class cosmopolitan clubs are located in Queen's Park near Chandni Chowk. One such club is the National Club situated at the western corner of the park. It provides facilities for indoor and outdoor games. On festive occasions they arrange cultural programmes. Its members are businessmen, students and clerks. Most of them come from areas round about Chandni Chowk and Katra Neel.

A few yards away to the east of the National Club in Queen's Park lies the other cosmopolitan club, the Union Club. Most of the members of this club are lawyers, businessmen and retired persons. The club provides a bar too. Those persons coming from Daryaganj also are members of this club.

The Young Men's Tennis Club too is located on the western side of the Queen's Park. They provide facilities for very popular games like badminton, ping-pong, and tennis. Majority of its members are young men.

In Civil Lines area there are several cosmopolitan clubs

located in the spacious Qudsia Garden. They provide facilities for games like cricket, hockey and tennis. Each club maintains about two tennis courts. Their members come from Civil Lines area and also from Kashmeri Gate.

Community Clubs

Many of the community clubs are found in New Delhi where the population is mostly composed of foreign-born recent immigrants. There are a few such clubs in Old Delhi too, but they are not so active as those in New Delhi. Examples of community clubs found in the city are: the Maharashtra Club, the Kerala Club, the Bengali Club, the South Indian Club, the Anglo-Indian Club, etc.

The Maharashtra Club with several sub-organizations working under it is mainly run by some of the Marathi-speaking people residing in the city. It is located at Connaught Circus which is easily accessible to all members living in different parts of the city. It provides its members facilities to play indoor games. Dramas and plays are staged on important occasions. They run a library too.

The Kerala Club is one of the biggest community clubs in the city which has a large number of active members. It is located at Connaught Place. In their own words, its main object is "to promote social intercourse among its members and to undertake all such activities as may be necessary for the promotion of Kerala culture and the interests of the Kerala community." They provide facilities for different types of indoor and outdoor games and also organise variety entertainments on special occasions. Its members belong to high and low income-groups and the membership fee is fixed on the consideration of each member's monthly income.

The South Indian Club near Connaught Place is run by members coming from Tamil-speaking areas in the south. The Tamil language group has other cultural organizations in Qarol Bagh and Lodi Colony where a large number of Tamil-speaking people live.

The Anglo-Indian Club too is located in Connaught Place. About seven-eighths of its members are those who belong to the Anglo-Indian community. The remaining one-eighth be-

long to other communities.¹ It has been organized in order to provide social and recreational facilities for its members. In addition to the facilities that are provided for indoor games they arrange ball-room dancing parties on important occasions. Surreptitious gambling is said to take place on certain occasions.

There are several Bengali clubs in Delhi. They are mostly found in areas where a large number of Bengali-speaking people live. There is one opposite Ritz Cinema at Kashmeri Gate, one in Lodi Colony and another one in *Kali Bari* near Birla Temple. They arrange very interesting cultural programmes. On some occasions they stage dramas and on other occasions they hold musical programmes.

There are dramatic clubs and also theatre groups. Sometimes they give public performances.

Besides these clubs, we find other semi-public organizations where recreational facilities are offered for one type of activity only.

Two of the well-known cosmopolitan semi-public organizations which offer facilities for recreation are the Y.M.C.A. and the Y.W.C.A. The former is for men and the latter is for women only. They are units of a very wide international organization of men and women. Through these organizations young men and women learn the art of living, working and playing together. They put a premium upon constructive leisure-time activities and also on sociability. Their programmes of recreational activities are very broad. They include indoor and outdoor games, entertainments, dramatic performances, musical programmes, physical education and gymnastics.

In the Y.M.C.A. the indoor and outdoor games include tennis, hockey, volley-ball, basket-ball, boxing, billiard, chess, card games etc. Any person can become a member by the payment of a small fee as annual membership fee and take part in these activities. It has a separate section for boys who are trained to find scope for developing their individual talents. The servants too have organized a servants' dramatic club as a part of their recreational programme. The Y.W.C.A. which is exclusively for women has activities closely parallel to those of

¹ Many outsiders become members of this club in order to use the bar and also to take part in games.

the Y.M.C.A. In addition it conducts games, dances, cooking classes for women, dress-making and keep-fit classes. The Y.M.C.A. and the Y.W.C.A. run separate hostels, one for men and the other for women, where accommodation is provided at moderate charges.

Both the institutions are located near Connaught Place.

AREA OF EXISTING PARKS

For the purpose of our study we could obtain data on area of parks within the administrative unit of Old Delhi Municipality only. The total population of this administrative unit—excluding that of West Notified Area Committee which was included recently, is 914,632. To provide recreational facilities to this number there are in the entire area 238.2 acres of land in use as city parks. They are distributed in the following municipal constituencies.

TABLE XIX
AREA OF MUNICIPAL PARKS IN OLD DELHI

Constituency	Area
Kashmeri Gate	1.09 acres
Katra Neel	50.46 "
Jama Masjid	50.78 "
Daryaganj	23.75 "
Roshanara Extension	85.00 "
Kamala and Jawahar Nagar	1.68 "
Model Basti	1.30 "
Chuna Mandi	0.14 "
Tibbia College	24.00 "
Total	238.20 acres

This 238.2 acres of park space represents a provision of one acre of park for every 3,840 inhabitants in the old city.¹ On the basis of area this forms 5.4 per cent of the total land under the administration of the municipality. We have to point out here that the proportion of about 3,800 persons per acre of park area is bad enough; but when we begin to analyse it a bit further the picture becomes more gloomy. For example, let us

¹ We have to note here an error that has crept into *Rajadhami Weekly*, the Old Delhi Municipality publication. The total area of parks as shown by them is 328.2 acres, but when we add the area of parks under different constituencies, the total comes to 238.2 acres only.

study the area called Qarol Bagh in the west. There is a big park, Ajmal Khan Park, located in front of Tibbia College. It is the only big park found in the whole area spreading between Model Basti in the east and Pusa Road in the west. The space covered by this park is only 24 acres and lies in the midst of a locality containing a population of over one and a half lakhs. Here the actual range of park facilities is one acre of park space to 6,500 inhabitants. Even if we add four acres of school playgrounds a significant difference is not made in respect of the amount of area available as park spaces for recreational purposes.

A worse picture of the wretched conditions in Delhi can be formed if we compare these figures with those of the cities in the West. Take, for example, the City of New York. There, at the end of 1920's even with high density of buildings, high land values and less vacant lands there was provision of one acre of park space for every 801 inhabitants.¹ In the year 1942 the standard of parks and spaces in Greater London was 7 acres per 1,000 persons and the Greater London Plan in the same year recommended an increase in this standard to ten acres by adding three acres of school playing fields.² In Moscow the conditions were far better. In 1937 there were 200 Central Parks of Culture and Rest (the right to rest is guaranteed by the Soviet Constitution) with a territory of several thousand hectares³ (one hectare is equal to 2.471 acres). It is thus clearly established that Old Delhi is extremely under-supplied with open spaces of this character.

The conditions in New Delhi are somewhat better. However, there too the problem exists. It is a garden city planned at the beginning to accommodate about 70,000 people. But today its population is more than two and a half lakhs of people.

1 Lee F. Hanmer, *Public Recreation, Regional Survey of New York and its Environs*, (1948), Vol. V, p. 64.

2 M. D. Mayerson and R. B. Mitchell, *Changing City Patterns, The Annals of the American Academy of Political and Social Sciences*, (1945), p. 158.

3 A Decree of the Moscow Committee of the Communist Party of September 3, 1921 says, "The Park of Culture and Rest is established to provide improvement in culture and health for millions of workers." These parks provide opportunities for mass parades and meetings, physical culture, exhibitions of art and science, all in a naturalistic setting. See M. F. Parkins, *City Planning in Soviet Russia*, (1953), pp. 213-15.

There are wide spaces around individual houses and also in between groups of houses, but well-maintained parks of culture are very few. For about 5,000 people in Gole Market area there is only the Talkatora Garden which is more than a mile away.

The minimum requirements should be placed at about five acres per 1,000 persons. The question will be considered in our concluding chapter.

EXISTING FACILITIES FOR COMMERCIAL RECREATION

A commercialised recreation is any activity that entertains passively and that is organized for profit. There has been a tremendous growth of such commercialised entertainments in the City of Delhi during the course of the last few years. At present they play an important part in the leisure-time life of the Delhi inhabitants. All such activities are provided to entertain the spectators and rouse their interests and emotions. Some of the entertaining activities of such kind found in the city are cinemas, theatres, popular sports like hockey and football, dramatic dancing, social dancing etc.

Cinema theatres

Of all the aforementioned activities cinemas attract the largest number of people in the city. This is essentially due to the fact that the cinemas are cheaper than any other kind of entertainment; they are convenient and offer a far wider selection of subjects than the general repertory performances. Moreover, they offer a considerable amount of relaxation and an escape from the ordinary routine of life.¹ In the Metropolitan City of Delhi excluding Cantonment and Shahadara there are about twenty well known cinema theatres operating at present. Out of them about twelve are first-run houses and the rest are second-run houses.² The total number of cinema theatres, the seating capacity of each house in each price-class concerned are given in the following table.

1 Marion J. Levy, *The Structure of Society*, pp. 532-33.

2 First run houses are those where recently arrived motion pictures are shown, and second run houses are those where pictures which have been exhibited at least once elsewhere in the city, are shown.

TABLE XX
NUMBER OF CINEMA THEATRES AND THEIR
SEATING CAPACITY

Name of Theatre	No. of seats in each priced-class					
	Rs. 4/8/-	Rs. 3/8/- to 3/12	Rs. 2/8/-	Rs. 2/-	Rs. 1/4 to 1/-	10 As. 5 As.
Regal.....	Nil	106	80	254	156	52
Rivoli.....	"	111	42	132	112	48
Plaza.....	"	100	104	278	168	52
Odeon.....	4	12	280	Nil	160	56
Stadium.....	Nil	Nil	Nil	58	290	116
Race Course.....	"	"	"	"	"	"
Total for						
New Delhi.....	4	329	496	728	836	324
Moti.....	Nil	20	104	130	266	208
Kumar.....	"	14	86	70	157	90
Palace.....	"	10	18	90	207	333
Robin.....	"	Nil	11	Nil	187	196
Jubilee.....	"	"	89	200	102	149
Majestic.....	"	"	118	119	151	170
Delite.....	"	56	274	268	364	106
Ritz.....	"	40	60	202	176	100
Khanna.....	"	Nil	84	230	188	100
Imperial.....	"	"	Nil	56	220	152
Minerva.....	"	"	172	185	208	149
Jagat.....	"	23	91	222	230	141
Novelty.....	"	Nil	186	196	178	110
Total for Old Delhi		163	1313	1949	2693	2005
Grand total for						
Delhi City	4	492	1609	3671	3534	2329

A study of these figures shows that the total seating capacity in the 13 theatres we visited number 11,255. If we add, as an acceptable average of 900 seats for the remaining two cinema houses not visited by us there is a total of 12,155 seats. This, in relation to the total population excluding that of Shahadara and Cantonment, works out at one seat per 110 persons. On the other hand, if we take into account three performances per day in each theatre, as all the theatres generally do, this seating capacity is sufficient to permit about one visit in every five weeks for every person in the city. These figures compare poorly with those of the cities of Western countries. For instance, take the city of Derby. There are sixteen cinema theatres to serve a population of about 200,000; and allowing for differing numbers of perform-

ances per day at the various houses their seating capacity is sufficient to permit two visits per week for every person.¹ In American cities the conditions are far better. In Detroit, where the population was 17 lakhs in the 1930's, the actual range of facilities was one seat to 9.7 persons and in New York it was one seat for every 8.9 persons.²

If we study the position area-wise, a sorry picture emerges. For instance, in the Western Extension Area where there is a population of about 80,000 there is not a single cinema.³ The residents have to travel a mile and a half or more for a good cinema theatre. The nearest cinema theatre lies either in Subzimidandi or in Paharganj. There are four houses situated in those localities and out of them three are second-run houses. Similarly, there is not a single cinema theatre in Civil Lines area where the population is about 83,000. They have to visit the cinemas located within the old city walls. The residents living beyond Sunder Nagar in the south too lack good cinema facilities. They have to travel about three miles to see a good cinema picture. This scarcity of cinema theatres in the suburbs is partly due to the over-concentration of existing houses in the central area and partly due to the shortage of cinema theatres.

The twenty cinema theatres are buildings ranging from small old ones to very large ultra-modern specially planned constructions. Robin Cinema in Subzimidandi and Khanna Cinema in Paharganj are illustrations of the former, and Delite Cinema in Old Delhi and Odeon Cinema in Connaught Place of the latter. Many of the cinema theatre houses in the city are renovated buildings equipped with restaurants, bars, etc.

At the time of our study all the houses provided seats at prices between Rs. 4/8 and annas 5. Among the most popular priced seats are the Rs. 1/4/- ones. In the higher-priced seats there is a difference between the seating accommodation provided in the theatres of Old Delhi and those of New Delhi. To the grade of seats priced over Rs. 3/- the New Delhi theatres have allotted 10.4 per cent of the total number of their seats.

1 T. Cauter and J. S. Downham, *The Communication of Ideas*, (1954), p. 126.

2 E. E. Muntz, *Urban Sociology*, (1938), p. 655.

3 There was a cinema theatre called Camp Cinema on the top of Anand Parbat. At the time of my visit it was closed down.

In Old Delhi allotment is only 1.9 per cent for identically priced seats. This indicates that the demand of the patrons for the higher-priced seats is greater in New Delhi than in Old Delhi. On the other hand the most popular seats in both Delhis are the Re. 1 to Rs. 1|4/- priced seats. In New Delhi 35.3 per cent and in Old Delhi 31.9 per cent of the total seating capacity of theatres are allotted to that group. In Old Delhi there are two cinema theatres which provide a separate group of seats for 5 annas. They are the lowest-priced cinema seats found in Delhi theatres. These two houses are situated in the industrial area.

If we study the cinema theatres grouped separately we find that two-thirds of the theatres in New Delhi provide seats priced above Rs. 3/- and only half of the theatres in Old Delhi provide seats above that price. On the other hand almost all the 13 cinema theatres in Old Delhi provide a proportionately larger number of seats in the 10 anna group than those in New Delhi. Another special feature observed in some of the cinema theatres in Old Delhi is the presence of a special class for women or families exclusively. Two examples of such theatres are the Palace Cinema in Subzimandi and the Imperial Cinema in Paharganj. The former provides 113 such seats and the latter 22. In a section under cinema-going we shall be describing the patrons who visit these cinemas.

Location of cinemas are shown in a separate map (see Fig. 11). A closer examination of the location map shows that many of the cinema theatres are concentrated round about Chandni Chowk, the main commercial centre in Old Delhi and the Connaught Place, the main retail business centre in New Delhi. There is an insufficiency of cinema theatres in the residential areas.

Games and Sports

Other commercialized recreational activities are the games and sports which provide recreation on the payment of a small amount. Such commercialized games or sports take place generally only once a year during the winter season. There is the well-known Durand Football Tournament which runs for nearly a period of two months. These tournaments are held in the Municipal Playgrounds at Kotla Firoz Shah. The test cricket mat-

ches too are held in the same locality in the winter season. Once a year inter-State hockey matches too are held in the city. However, such commercialized sports or games are comparatively few.

There is a spacious area allotted to public exhibitions. It is located along Delhi-Mathura Road not far away from the New Delhi Stadium.

Gambling

The city also provides at least one facility for gambling or betting on games of chance. One of the biggest betting spots patronised by a class of inhabitants in the city is the Delhi Race Club. Horse-racing is managed by this club and the races are run on holidays when people are free to attend. The race course is located near Wellington Aerodrome in New Delhi.

Dancing

Delhi offers enough facilities for commercial dancing. This requires an active participation generally by the onlookers too. There are two important types of such dancing in the city. They are dramatic dancing and social dancing. The former type is performed for the sake of its effect upon the onlooker. The ideas are conveyed from the mind of the dancer to that of the spectators through kinaesthetic. In the latter type the dance is performed for the sake of its effect generally upon the dancer himself. In the former type we include the dramatic dances such as Bharat Natyam or Kathakali or Manipuri dances which are held now and again in the city. Some of these dances expound a theme by means of gestures; others lack a theme. In the social type of dancing there is the fox trot, the rumba, the samba and similar other types.

There is a dearth of facilities for dramatic dancing in the city. Only a few coaching institutions are found and the places for their performances are also rare. Many of these dancing performances are generally arranged by different community clubs like the South India Club, the Kerala Club or the Maharashtra Club. However, there is no scarcity of places for social dancing in the city, mainly in New Delhi and also in Civil Lines area. There are the dine-and-dance restaurants which serve

meals and also provide a small place for dancing and cabaret, the dancing schools operated by professional instructors and also the ultra-modern hotels with dance halls. These places are mostly patronized by the upper income-groups. Some of their activities will be described in sections which will follow.

The other types of commercialised recreational activities are the musical mushairas, jig shows, exhibitions, circuses, magic performances, etc. Musical and poetical mushairas, jig shows, circuses and magic performances are mostly held in places near the business areas of the Old City. Social dance hotels and halls are situated mainly around Connaught Place in New Delhi and also in Civil Lines area. Places of artistic dancing too are situated in and around Connaught Place in New Delhi.

CHILDREN'S PLAYGROUNDS

In order to obtain a clear cut picture of the actual conditions with respect to provision for children's play we conducted a short study of a few children's corners in the city. We selected two children's corners from Old Delhi and two from New Delhi. Before presenting the data we must point out again that there are only 11 children's corners within the limits of the Old Delhi Municipality. Figures for New Delhi are not available, but from our observations and enquiries we gathered that New Delhi does not provide more than seven public children's corners.

One of the selected children's corners in Old Delhi is located in Queen's Park near Chandni Chowk and the other is located in the congested industrial area near Delhi Cloth Mills in Bara Hindu Rao. Out of the selected two in New Delhi one is located between Rouse Lane and Irwin Road and the other in Jodhpur Park located between Shahajahan Road and Pandora Road. The residents round about the former area in New Delhi are clerical servants belonging to the middle-income group and those living around the latter area are highly paid government officials belonging to the upper income-group.

We visited one corner on every Saturday evening of the month of October when the weather was very fine. The study time set was between 5 P.M. and 6 P.M. in the evening when children were expected to attend in large numbers. We took a

census of the children playing at that time and also made enquiries from each child or from the elderly person with whom it came, the location of its house, how it came, the time that it would leave the ground etc.

The children's corner at Queen's Park is located facing the Central Circle. It is more or less trapezoid in shape and has one entrance only. The area covered by this park is about half an acre. At the time when the study began there were six children playing and gradually the number increased to 22 children—17 boys and 5 girls—by 6 o'clock. Within the study hour four boys left the place. A study of the location of the residences of all the children who visited this children's corner shows that they come from a radial distance ranging from one-fourth of a mile to half a mile. Those who come from places about half a mile have to cross very busy traffic streets like Chandni Chowk and Queen's Road. Three six-year olds were accompanied by their guardians who too played with the children in the corner.

The second children's corner studied in the industrial area, is one of the badly neglected corners in the city. It is triangular in shape and is not more than half an acre in area. On two sides of the triangular park there are old houses and on the third side is a heavy traffic road. The park is surrounded by a waist-high wall. Throughout the day we found groups of children entering the park, playing for some time and then leaving. At the time of the commencement of our census there were 8 children, all males and at the conclusion the number rose to 18. All were boys. Between the study-hour many of the children, ill-clad, entered in a group of eight or ten and left after about 15 minutes' play. The total who entered and left numbered 33. There were no elders with them.

Most of the playground equipments like swings and slips in this corner were broken. During the study hour it was observed that some of the children climbed over the walls and jumped on to the main road and chased horse carriages. Some stole pieces of vegetables from vegetable carts. Some ran after *tongas* and then clung on to the lower carriage. Some kept stones on the *tonga* cart track.

We noted that all these children except two came from places within a radius of a quarter of a mile. These other two

children, who were school companions of a group, came from an area about three-quarters of a mile away.

The third children's corner is at Rouse Lane in New Delhi. This corner is more or less trapezoid in shape and is about three-fourths of an acre in area. On one side there is a main road, on the other a lane and the other two sides are surrounded by an open lawn. At the commencement of the study there were 25 children—16 girls and 9 boys. At the end there were 54 children—32 girls and 22 boys. All were below twelve and came from nearby houses situated within a distance of about 200 yards. Many walked from their houses alone and some were escorted by elders. In some cases elders escorted them to the corner and left for their houses and returned again to take them back. In other cases the parents stood on the verandah keeping an eye on the children till they entered the playground. Every child who entered stayed more than an hour and left for home at dusk.¹ No one left during the study hour.

The fourth children's corner is the one at Jodhpur Park. ■ is located in a bigger park near Kingsway. The area allotted to children is not distinctly marked out. At the commencement of our study there were 7 children—five boys and two girls. During the study-hour many came in and at the close of the hour there were 24 children—9 girls and 15 boys. No one left the ground during the hour. All of them came within the distance of a quarter of a mile. Many had to cross light traffic roads. About 18 children were escorted by their guardians. Some came in prams, some by small tricycles and others walking. They played on the swings and on the slips throughout the period and left the place at dusk.

But not all children of the area could or did take advantage of children's corners. Besides the children who made use of the children's corners, there was a large number, specially in Old Delhi, who played on roads due to lack of playground space. In one street alone in Bara Hindu Rao we counted 24 boys playing riotously in the streets near their residences and when questioned they replied that there were no playgrounds

¹ Finding it necessary for the purpose of accurate observation, the previously scheduled period was extended.

nearby. The consequence has been, as we learnt, some children have met with accidents. This danger to the body and limb of the children, if not to their life, continues to persist.

Our investigations on children's playgrounds indicate firstly, that the public play spaces allotted for children, specially in the Old City, are very far from adequate. Even if we assume an average area of two acres per children's corner, even which is high, for each children's corner in the old city a child will not have one and a half square feet to play about. In New York city during the 1920's there were 17.4 square feet of play space for every child. Secondly, the existing spaces are not properly equipped with playing material for children; thirdly, the attendance in almost all the playgrounds in the city is very small in proportion to the number of children living in the neighbourhood; fourthly, many of the neighbourhoods lack playgrounds and the children are naturally led to play in streets in groups; and fifthly, the area of influence of an existing children's playground covers a radial distance of from one-fourth to half a mile though in some areas it is slightly more.

LEISURE-TIME ACTIVITIES

Leisure-time activities in Delhi can be classed under two groups. They are the indoor activities and the outdoor activities. Some of the indoor activities of the inhabitants in the city are card games, gossiping, playing with children, visiting theatres, cinema going, dancing and visits to clubs, associations and museums.

In Delhi, lack of proper neighbourhood amenities, as we have pointed out in the earlier sections, keeps people engaged most of their leisure time in informal activities at home. A few persons may get together and share some mutual interests: card-play, chit-chat etc. In New Delhi nearly three-quarters of the 72 heads of households of low-paid clerks we interviewed said directly, "We have no time to engage in such activities. We return from office at about 6 o'clock. We have to go to the market and then look after the children till they go to sleep. By the time we finish all this, hardly enough time is left to indulge in the type of the activities about which you enquire. We have no time for such things on week days." We note that

the people in Old Delhi, too, have little time to engage in recreational activities during the week days. Sunday is the only day when they can devote their time to such activities. However, we observe that the upper income-group living in both the areas take more active part in formal activities even on week days.

In Delhi card games are very popular among the rich and the poor alike. Usually two or three neighbours get together and play a game of cards till midnight. Sometimes people in wayside shops sit under the shadow of a neighbour's shop and play a game of cards in the afternoon when there are only a few customers. As the game is played the hookah is passed round.

Another popular game played during the leisure-time, mostly by the old residents of Old Delhi, is *Chaupathi*—a game like lot-backgammon. It is an indigenous type of game played with dice whose throw determines the movements of almost conical shaped bone pieces on squares. Two or four persons get together and play it on the verandah or on a board. Sometimes a group of spectators gathers round to witness the game.

Gossiping

Gossiping is another informal activity of the people. Mostly women take part in it. The short period after the lunch hour in the afternoon can be termed the gossip hour in Delhi. Good neighbours generally get together and carry on gossiping at that time. It drags on till the children return home from school or at the time when the husband is expected back. Sometimes they get an opportunity to gossip at the market place. The subject of their talk ranges from children at home to marriages and love-affairs of men and women living in the neighbourhood—as we have already pointed out in one of the previous chapters. Sometimes a good neighbour accompanies the other on a marketing trip in order to keep her company. In houses the venue of their talk is either the back lane or the front verandah or the lawn. Men get comparatively little time for gossip.

Visits

Visits by the head of the family to the house of a friend or a relative in the city take place generally on a Sunday. Even on

Sundays it is in the afternoon that they pay such friendly visits. We find that the husband and the wife of many of the families of the middle income-group usually do not visit in company. They are unable to do so as they do not employ servants. When visiting, at least one adult member stays at home or, alternatively, all the members go, closing the doors. Bad transport facilities, too, have brought down the number of daily or weekly visits to the minimum.

Theatre-going

There are two well-known theatre groups in Delhi. They are the Indian National Theatre and the Little Theatre Group. They arrange performances based on modern themes and also classical dramas. From our interviews we note that many people have not yet developed a taste for dramas. This is the exact opposite of the situation anent cinema theatres. In two areas, out of 72 families of the middle income group we interviewed, there were only eight who had been to see a theatrical performance during the course of the previous three months. All informants stated that the rates are exorbitantly high and are not within the reach of the middle or the lower income-groups. The organizers of the theatre groups when questioned stated that the theatre in Delhi will not become popular till there is a public theatre hall for performances.

Dancing

In Delhi social dancing plays an important part among the members of the sophisticated higher income-group. In some of the dine-and-dance restaurants in New Delhi, weekly dances are held. For example, there is Metro Hotel where a regular cabaret is held on Thursdays. It is mostly patronised by men belonging to the middle income-group, majority of them being unmarried people. In hotels like Maiden's Hotel in Civil Lines or Imperial Hotel in New Delhi dances and cabaret are held every night except on Tuesday which is a "dry" day. They are the rendezvous of the elite in Delhi.

Dramatic dances like Bharat Natyam or Kathakali are generally held under the patronage of different community clubs. Such dances are held on important occasions and mostly the

members of a club get the opportunity to see it, though of course, others interested can attend a performance as the guests of members.

Circus

Usually a circus makes a halt at Delhi once a year, always during the winter season. It pitches its camp at the broad lawn opposite Jama Masjid in Old Delhi and its shows run for about a month and a half. Circus is very popular among the lower as well as among the upper income groups. Almost every one interviewed spoke to us about the hair-raising feats performed by one circus or the other which had given performances some few months prior to our enquiry.

Cinema-going

In one of the earlier sections we pointed out that Delhi has 20 well-patronised cinema theatres. All those theatres are kept open on all the seven days of the week. About 17 of the theatres present three shows a day, i.e., from 3 to 6, 6 to 9 and 9 to 12 in the evening. Two or three theatres in Connaught Place conduct an afternoon show, too, from 12 to 3 P.M. This show is run at reduced rates and to put the explanation for it in the words of a theatre-manager, "It is to pull in women and children from their homes in the noon." On Sundays almost all the theatres conduct a morning show at reduced rates.

Mostly English films are shown in the theatres at Connaught Place and those located in other parts of the city show Hindi films. Films in regional languages like Bengali, Tamil, Marathi are generally shown on Sunday mornings in the theatres in Connaught Place.

We find that the frequency of cinema-going activity depends on age. Income, too, has a bearing on it. Generally speaking Saturdays, Sundays and also public holidays are house-full days for the theatre. To study the size of the theatre audience over a week or a month, we have no proper data of box-office collections by sale of tickets. They are a guarded secret of the trade. However, many of the theatre-managers interviewed stated that during the first week of the month there is a bigger box-office collection than during the other weeks. But this can-

not be the rule as there is a large box-office collection made during the week when a new picture is introduced, even when the opening happens to be during the middle or the end of a month.

The only free day for many to visit the cinema is Sunday and the cinema theatres are always full-houses on this day. When those who are habituated to cinema-going find one cinema house full they try to drift into another cinema even miles away and even when the show exhibited there is not particularly good. However, this is rendered rather difficult due to bad transport facilities.

In the 72 houses we investigated about half of the heads of households stated that they visit a cinema "once a month or so." The younger folk stated that they visit the cinema once a week or sometimes twice a week. Six adults from the same group declared that it is the only recreation for them and they indulge in it about three times a week. Almost all the old men above 50 stated that they had never visited a cinema during the course of the previous six months. The reasons for these differences vary. Some stated that they have no time; some said that there is no cinema theatre in the neighbourhood just to 'pop' in; some were of the opinion that cinema going in Delhi is a very expensive affair and others said that the cinema is bad and they do not take interest in it. We observe that one Catholic church had come forward to point out what films are good and what are bad.

Nearly half of the households were against children going to cinemas. One said: "They spoil our children." Another said: "They are taught to become crooks and criminals." A third one said: "It is a bad habit." In support of this view we may offer a quotation from a petition submitted to the Prime Minister recently. A report says, "13,000 housewives and mothers of Delhi petitioned the Prime Minister demanding action to control the evils of the cinema."

The petitioners asserted, "The cinema films today are becoming a major menace to the moral health of our children. Not only are they inciting them into precocious sexual habits, but are also serving as a major factor in incitement to crime and general unsettlement of society. Large numbers of children do

not attend schools. They steal money somehow to go to the cinema. The juveniles are the most important element of cinemas in big cities. . . . We have held dozens of meetings all over Delhi attended by thousands of persons demanding this [action to control the evils of the cinema] from Government."¹

We observe that the income has some influence on the choice by individuals of different graded classes. Persons from the upper income-group like government officials, industrialists, military officials and others of the group, choose higher priced seats. The general practice of those of the middle income-group like clerical servants, salesmen, is to choose the Rs. 1[4]- to Rs. 2]-priced seats. However, a romantic newly married couple from their group may purchase tickets for the higher priced seats. Ten-anna priced seats are always patronised by persons of the lower income-group; some of them are hawkers, industrial labourers and students.

The nature of pictures screened in Delhi theatres varies from adventure pictures, love stories to newsreels that project the views of the government. Some present idealized reflections of life. The pictures are, indeed, of the same variety catered everywhere.

We find that every one has a taste of his own about the choice of a picture. Some like to see pictures depicting social problems; some like to see pictures where fighting, kidnapping are shown and some like to see those with lilting songs.

From the time the picture goes on the screen we find that the people too move on to an imaginary plane. If the helpless cries some of the spectators break into tears in sympathy² if they laugh, they too laugh. When an erotic scene³ is projected on the screen some younger folk specially from the front rows scream with excitement; some feel sympathy with the helpless hero or heroine and some shout with joy when the hero saves

¹ *The Statesman*, (Delhi Edition), June 20, 1954.

² As an example we may point out here that the film *Boot Polish* was shown for several weeks at the Rivoli Theatre House in Connaught Place. Though it ends happily, it is a picture with some pathos. On many occasions we observed several women and also some men shedding tears.

³ Scenes depicting the act of kissing are censored in Indian films. Only foreign films show such scenes.

the helpless heroine from danger. If there is a group of friends hailing from Punjab, for every type of witty or odd remark that the characters make one will offer the hand to the nearest friend shouting out "Hath Milao" and shake hands.¹

Tea and Coffee-drinking

Many young men as well as the elderly people have made it a habit to meet friends in restaurants. They meet at a restaurant and chit-chat for a long time over a cup of tea or coffee. While the drinking goes on new friends are brought in and introduced to others. Popular spots for such activities are the India Coffee House, Nirula, Metro Hotel etc. They are located at Connaught Place.

Tuesday is a dry day in Delhi. No alcoholic drinks are served on that day. On other days of the week some adults meet together in a bar and have a round of drinks like beer, brandy or whisky. Many of the people of the middle income-group we came across in Old Delhi as well as in New Delhi were against alcoholic drinks.

Club activities

We find that many of those belonging to the upper and middle income-groups who migrate to Delhi from distant provinces become members of their community club. When questioned, some explained that they act so as they become lonely and homesick in new surroundings. At least once a month the club members meet for a chit-chat. Sometimes those members who stay nearby pay a visit occasionally to play cards, billiards or to meet friends. Those members who have business interests get together and talk on business activities of the day. Some enjoy a drink if it is not a Tuesday and there happens to be a bar at their club. Some enter the reading-room if there is one. Till about 10 o'clock at night the club life specially in New Delhi is active. Many upper class cosmopolitan clubs run till about 11 o'clock at night.

1 "Hath Milao" means "offer your hand". This sort of hand-shake is a traditional habit of the Punjabis.

OUTDOOR RECREATIONAL ACTIVITIES

The outdoor recreational activities of the inhabitants in Delhi City are comparatively few. Most of these activities take place during the winter season only. During the summer it becomes so hot that it is well-nigh impossible for a person to go out and engage in such activities till late in the evening. Some of the recreational activities are: children's games like *Kabadi* and *Gulidanda*; adults' games like football, hockey and cricket, boating, sports watching, picnics and gay walking.

Kabadi is a very popular game among children in Delhi as in other parts of India. Two parties are formed for the game and a member of one party invades the territory of the opponents and try to touch them while uttering the words *kutch, kutch, kutch*. If the opponents capture him, the opposite party loses one point and thus the game goes on till one side loses all.

The other popular games played by children are "*Gulidanda*" and "*Langda dang*". "*Gulidanda*" is played with two sticks, hitting one with the other and "*langda dang*" is played by jumping from one square to another.

These games generally bring together the children of neighbouring houses. They play in nearby lanes, roads and also in small back-yards available in the neighbourhood.

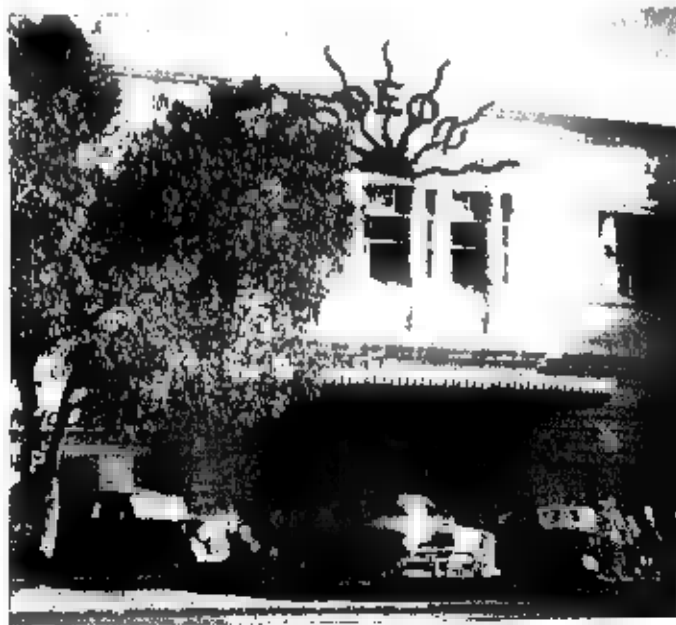
Games like football, hockey and cricket are played generally during one season only. Many of the younger folk take part in them. There are clubs for such games and their members play it generally on Saturdays and on Sundays. But many are those who go to watch sports and games.

Sports watching is one of the chief interests of the inhabitants of Delhi City. At clubs, at tea shops and in office, sports and sport-news become the talk of the day during the season. There are many who are regular visitors to see these games. The popular games of the sports-loving people in Delhi are football and hockey. Thousands of people gather to see the Durand Football matches held annually in the winter season. Inter-State cricket matches too are played during the winter season. But only a few take interest in cricket. Some clubs in Delhi arrange badminton matches too. But only the members of the club and a few outsiders attend to see them played.



The existing playground spaces for children in the city are insufficient to meet their recreational need. Some are not well maintained. This is the picture of such a playground located at Queen's Garden, Old Delhi.

(b)



Cinema time in New Delhi. This picture shows an ultra-modern cinema theatre situated at Connaught Place, New Delhi.

Clock-tower at
Subzimandi.



(b)



In some parts of Old Delhi the workshops of the people and their places of residence are not separated. Those people who do business in the shops shown here reside upstairs. Note the conditions of houses and the roaming stray cattle. This picture is from Kashmiri Gate.

Racing

Racing is popular only among the upper income-groups. But there are others too who go to the race-course and bet on horses. The races are held during the winter season only. We find two entrances opened to the public at the race course. One costs Rs. 3|12|- and the other costs only 10 annas. The attendance in the 10 anna side is low when compared with that of the other side. The total attendance we observed on each occasion during our five visits did not number more than 1,000 out of which about four-fifths were on the Rs. 3|12|- side. Our enquiries from the families of middle income-group show that they do not take interest in races. However we find a few who like to attend races "just to see" the horses running.

Boating

The only place available for boating is the Central Vista Tank along Kingsway. On Sundays and on other holidays many people go there with children to enjoy a boating ride. In old Delhi we came across people who at the time of enquiry did not know that there was a boating tank. From Old Delhi this place is about four miles away. On moon-lit nights it is kept open till midnight. This gives an opportunity for young men and women to stray in for a couple of hours.

Picnicing

Almost all people, whether high or low, go on picnics occasionally. Sunday is the picnic-day for them. The places that they visit are the ancient ruins and places of historical interest like Kutab Minar, Red Fort, Kalkaji, Nizammuddin, Jantar Mantar. Birla Temple on Reading Road attracts thousands of people specially on Sundays and on public holidays. In our enquiries there was not a single Hindu resident who had not visited that temple during the course of three months previous to the day of enquiry. Sometimes people take their children and play with them in the well-equipped park located behind the main temple. Okhala is another spot which is frequented by picnickers on holidays. Hundreds of people go there by bus, cycle-rickshaw or by cart. They take a bath at the mouth of the canal and enjoy a good picnic lunch too.

Walking

Walking is one of the leisure-time activities of some youth in Delhi. In the evening groups of people walk round about the Connaught Place and also in other retail business centres. Sometimes, two or three persons on bicycles join their hands and cycle along the roads leisurely. On some occasions they follow a young woman travelling in a *tonga* casting jocular remarks at her. Older people get together and go out for a pleasure walk in nearby parks if there are any.

RELIGIOUS DISCOURSES

In Delhi very often religious discourses are held in public parks. They are held generally in the evening when people are free to attend. As examples we may point out those that take place at the public parks like the Ajmal Khan Park in Karpal Bagh and also in Roshanara Garden in Subzi Mandi. Every evening a large number of people specially those who belong to the Sanathana Dharma sect sit in groups round a preacher and listen to the sacred hymns sung by him. A few stanzas from the *Mahabharata* are read to the accompaniment of music and commented on. The audience too sings with the preacher. A placid atmosphere prevails over the whole area and even those who pass by drop in just to listen to the melodious stanzas sung by the priest. In one evening we counted 148 such persons gathered in five groups in Ajmal Khan Park. About three-quarters of this audience consisted of people belonging to the over forty-five year group and half to half were men and women.

TEMPLE AND CHURCH-GOING

Hindus and a few other related religious groups who form the majority of the inhabitants in Delhi do not attend temples regularly as the Christians or the Muslims do. They conduct their individual worshipping at home and attend temples generally on important occasions. Christians and Muslims visit the church and the mosque regularly. Christians attend the church on Sundays and Muslims attend the mosques on Fridays.

Within the city limits of Old Delhi and New Delhi there are twelve Hindu Mandirs (temples), nine Sikh Gurudwaras, five Arya Samaj Mandirs, four mosques, five Churches belonging to

Church of Burma and Ceylon, five Protestant Churches and three Roman Catholic Churches.

Hotels and Eating Houses

There are a considerable number of hotels, restaurants, eating houses and rest houses which cater to the needs of the tourists and also to those of the long term visitors in the metropolitan city. Some of them provide accommodation and meals and some only meals.

These establishments which provide accommodation are residential hotels and they can be grouped into two categories. Under the first category there are the European-style hotels where facilities are offered as in Western countries. Under the second category are the Indian-style hotels where everything is more or less Oriental in style. There are seven hotels coming under the first category and 28 coming under the latter. All those hotels in the first category offer accommodation to about 750 clients and those in the second to about 600 clients.

We find that the western-style hotels are mostly frequented by persons in the upper income-group and the Indian-style hotels generally by those in the middle income-group. The daily charges for accommodation in a Western-style hotel range from Rs. 20 to Rs. 50 and in the Indian style hotel it ranges from Rs. 5 to Rs. 15.

Both the location and the upkeep of the two categories of hotels in the city differ. The Western-style hotels are airy, spacious and are situated in beautiful surroundings. But many of the Indian-style hotels are dirty, overcrowded and are found in the congested areas in the city. For example, we find Western-style hotels such as Imperial Hotel, Ambassador Hotel situated in the residential areas of the upper income-groups near Connaught Place in New Delhi and Maidens Hotel, Cecil Hotel, Swiss Hotel and Grand Hotel situated in Civil Lines area where Europeans used to live upto recent times. The Indian-style hotels are situated near Chandni Chowk, in Daryaganj and also in Connaught Place.

Besides these residential hotels there are a large number of restaurants and eating houses where only meals and refreshments are served. The restaurants are found scattered through-

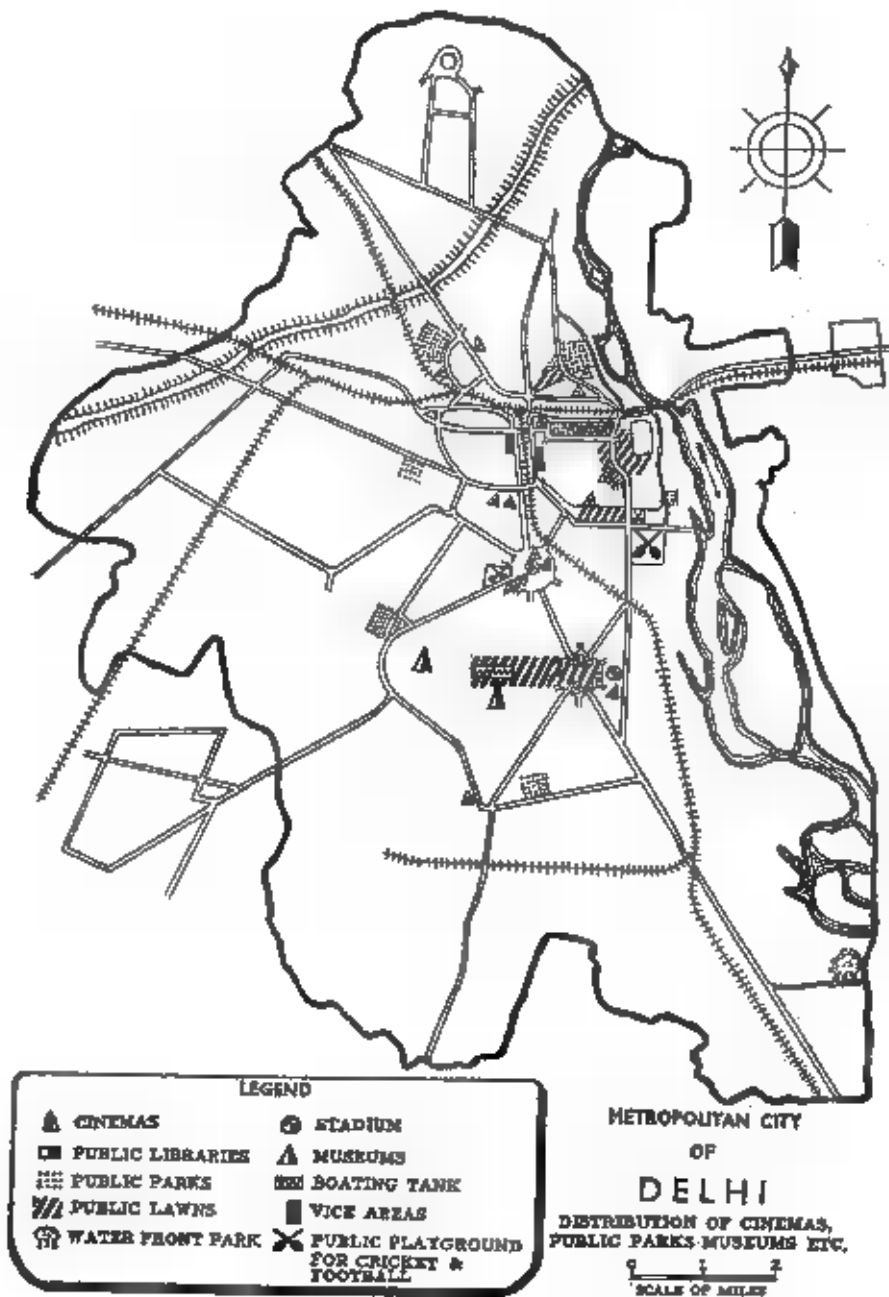


Figure 11

out the length and breadth of the city. The eating houses are located mostly in the residential areas of middle income groups. For instance, in Qarol Bagh area alone there are about 12 eating houses.

The rest houses in the city are run by various public organizations. They are mostly communal rather than cosmopolitan. For instance, there is a rest house at *Kali Bari* in Reading Road where temporary accommodation is offered to a visitor from Bengal. In *Birla Temple* there is a rest-house which offers accommodation to Hindus, Jains, Buddhists etc. There is one in *Naya Bazar* for Maharashtrians. Similarly there are Muslim rest-houses too. There is a rest-house located near *Nigambodh Ghat* which offers accommodation to Hindu sadhus.

WASTE PRODUCT OF CIVILIZATION

A trip by any person to Garsten Bastion Road or popularly known as G. B. Road or Kutab Road at night creates suspicion in the minds of Delhi people about him. For they are the asylums where every type of vice has taken refuge. They are the places where culprits, hobos, criminals, prostitutes and all other restless and unsettled individuals live. These are such notorious spots in Delhi that a city daily very rarely brings out an issue without a report pertaining to them.

We do not know how many brothel houses and prostitutes are found in the City of Delhi today. But they are extant. That such a trade thrives is an open secret which every adult man and woman knows about. Not even the police know the total figures. Censuses of different decennial periods give different figures; but we do not know how far they are true. The 1931 Census speaks of 325 persons as "procurors and prostitutes." This number must have risen by about four times since then as many a woman, ousted from her legitimate hearth and home, had drifted in the city in search of food and shelter. From a social welfare worker we gathered that there are about 700 prostitutes in the city. Taking into account all the available information and piecing it together we can safely place the total above 1,200.

In a leading city like Delhi where a high percentage of population consists of immigrants and where there is a marked dis-

proportion of sexes, men greatly outnumbering women, growth of such an area is inevitable. According to 1951 census in a ten per cent sample there are 1,626 unmarried males in the last years of twenties and in the beginning of the thirties. Similarly, if the Census figures are accepted every 360 adult males in a thousand population are without females. Hence they have to live either in emotional starvation or give way to the satisfaction of their appetites.

It is said that about hundred years ago, prostitution in Delhi was regarded as a decent profession, for many of the prostitutes catered to the needs of the noblemen. Their sons were sent to them to learn the art of making friends with strangers and also to study the know-how of social life. But today it has turned to be the most degrading profession that a woman in Delhi could follow.

We found from enquiries that there are two kinds of prostitutes in Delhi. There are those who have entered the group of their own free will and those who are forced to follow it, the so-called 'white-slaves' as the term is used in popular discourses. When those who willingly enter the profession fail to meet the demand, 'white-slaves' are brought in. They are brought into these areas on promises of good money, good life. But when they enter the profession, we were told, the life of the 'white-slaves' becomes that of chattels. They are forced to do what their masters or mistresses ask them to. They are scolded, they are beaten and they have to see that enough income is earned for their pimps in order to secure their daily bread.

Prostitution is openly tolerated in Delhi, the Government knows that it exists and so does every adult. There are even laws concerning brothel houses and other connected activities and sometimes we read reports of cases where they are applied. Perhaps it is tolerated in order to provide an outlet for the needs of the unmarried middle-aged man or to the visitor in the city for we were informed by the pimps that visitors from outside form a large part of the customers. No other explanation seems to offer the *raison de etre* for this evil to exist. People do not want evil to thrive, for every year, Ravana and also Kumbhakarna, the symbolic effigies of evil are destroyed and set fire to before everyone on the Ram Lila Day.

No one in the city finds it difficult to locate these areas. They are not far away. They are found in the heart of the city. They can be reached in eight to ten minutes ride from the industrial, commercial and the administrative centres. There is that well-known road where engineering and building construction materials are sold during day time. When the business of the day is over and the shops are closed for the night the 'painted women' and pimps take a stand on the pavements and the back lanes and start their business.

No visitor to these areas during day-time will know where they live because sunlight drives them to the backyards and backlanes. But occasionally, you may see a 'painted woman' peeping through a window or standing on a balcony or wheezing by in a cycle rickshaw covering her head for they are much more particular about observing purdah in day-time than an ordinary woman.

Enter these areas after seven, you will only see a market place of purchase and sale of human beings. You will see the strange spectacle of people enjoying their leisure, though degrading their own fellow beings in the process.

You need not go in search of them. The Delhi tongawalla will take you. He is ready at dusk for that job because he knows that there are many customers going that way. Stand at dusk at the entrance of Chelmsford Avenue in Connaught Place or at the Clock Tower in Subzimandi. The *tongawalla* will come to you and will call you. Get into a *tonga*, wink at him and say 'go'. He will take you to the right place and ask you to alight. As soon as you get down the pimps will fall on you. He will tell you where they are. He will tell the price in a sign language. He will ask you what your desire is; whether you wish to have a woman of a particular community. He will ask you whether you want 'new' because he has it ready to cater to the needs of everyone's taste. He will quote the price. If you agree, the whole business is over in a moment.

But the regular customer who knows the trick of the trade bargains well. When rupees five is quoted as the price he will offer two and after long higgling and haggling the price does drop down to that amount. Prices always vary. The price varies

from one street to another. Charges may be less on Kutab Road because the poorer amongst these fallen creatures live there.

We cannot deny that there is clandestine prostitution in Delhi. There are persons who want to do things under cover, who want to lead that kind of life while attempting to escape the stigma associated with it. Clandestine prostitution is mostly confined to the New City. It has no exact location. The places of its practice change. You may meet a clandestine prostitute at the club, at the dine and dance hotel; you may meet her in a taxi and sometimes even on the streets. Or just speak to some taxi-walla he will arrange that one to meet you. You may be able to get her even on the phone. But clandestine prostitution is a costly business in Delhi.

CHAPTER VIII

EPILOGUE : A BLUEPRINT FOR REDEVELOPMENT

It is the intention of this concluding chapter to give in brief outline a description of the zones and their distribution and indicate also some of the major provisions that are necessary for the redevelopment of the City of Delhi.

Zoning consists of that portion of space to which typical functions are allotted as one of a series based on an orderly qualitative classification. A zone thus classified may include numerous parcels of varying sizes scattered throughout the larger territory occupied by the community. Here we shall be classifying them according to their existing functions.

On this basis, we can classify the city into several broad zones and sub-divide each zone into several areas according to their specializations. The six broad zones are : (1) the Business-cum-Commercial Zone, (2) the Industrial Zone, (3) the Administrative-cum-Cultural Zone, (4) the Residential Zone, (5) the Cultural Zone, (6) the Commuters' Zone and (7) the Green Belt. The sub-divisions of each of these zones into areas are as follows : the Business-cum-Commercial Zone into Wholesale-cum-Retail Business Area, Wholesale Business Areas, and Retail Business areas; the Industrial Zone into Heavy Industrial Areas and Light Industrial Areas; the Administrative-cum-Cultural Zone into Central Administrative Areas and State Administrative Areas; the Residential Zone into Higher Income-group Residential Areas, the Middle Income-group Residential Areas and the Lower Income-group Residential Areas; the Cultural Zone into Educational Areas and the General Culture Areas and the Green Belt into the Agricultural and the Non-agricultural Areas.

BUSINESS-CUM-COMMERCIAL ZONE

We shall now describe the location of different areas and

their various specialized characteristics in detail. Within the Metropolitan City of Delhi we find one Wholesale-cum-Retail Business Area, three Wholesale Business Areas and one Retail Business Area.

The Wholesale-cum-Retail Business Area (1) is located along the main thoroughfare called Chandni Chowk in the heart of the city.¹ The boundary lines of this Area are : Queen's Road on the north, Esplanade Road on the east, Chowri Bazar Road on the south and Lal Qua-Naya Bans-Khari Baoli Roads on the west. From there a small strip spreads along Naya Bazar Road upto Queen's Road.

This Area is the focal point of all traffic streets and the termini of all the transport systems. It is along Chandni Chowk that the main Delhi offices of all the banks and insurance companies are situated. All the well-known retail dealers of drapery and millinery goods are also found along this road. In this area is located the Dariba Kalan which is a famous jewellery market. Further up in the west there is Khari Baoli, the wholesale market of ghee, kerosene and lubricating oils. Then there are about eighteen *katras* running from Chandni Chowk towards Chowri Bazar. They are full of retail dealers in cotton and woollen goods and also in other materials. Mahabir Bazar, Katra Manak and Katra Hiral are the biggest among them. There are the iron and hardware merchants along Chowri Bazar. Nai Sarak is full of wholesale and retail dealers in goods like stationery, footwear and musical instruments. In Naya Bazar is the well-known wholesale market of grains. It is the distributing centre of grains to the whole region. Dealers in cycles and cycle accessories are found along Esplanade Road.

The three Wholesale Business Areas are : the Kashmeri Gate Area (2), the Sadar Bazar Area (3), and the Subzimaundi Area (4). Each of these areas is well-known for wholesale business in one or two types of goods only.

The Kashmeri Gate Area is the wholesale market in motor-cars, cycles and cycle-accessories. This area spreads along Elgin Road upto Kashmeri Gate.

The Sadar Bazar Area is located between the Industrial Area

¹ These numbered areas are shown in the zonal distribution map. See figure 12.

and the Wholesale-cum-Business Area in the city. It spreads from Kutab Road upto Bara Tooti along Sadar Bazar Road. All the well-known wholesale dealers in hosiery, crockery and toilet goods are to be found here.

The Subzimandi Area is known for the wholesale market in vegetables and fruits. It is located near the Ice Factory in the south-eastern part of Subzimandi. It is the vegetable and fruit distributing centre for the entire region.

The major Retail Business Area (5) in Delhi is the Connaught Place. About 400 shops selling different types of goods are found here. All these shops are housed in arched buildings. One group of shops runs along Connaught Place. In the outer circle are found furniture merchants, car and motor-cycle merchants, radio shops, pumps and machinery goods merchants, printing presses, musical instruments shops and restaurants. In the inner circle are jewellery merchants, millinery goods shops, drapers, sports goods merchants, shoe merchants, electrical goods shops etc.

The life in these areas begins from 11 o'clock in the morning. An enormous volume of traffic starts flowing into the area continuously. At about 10 o'clock the shops and the commercial firms begin their transactions. Loading and unloading of goods to and from carts and lorries start. The streets become very much congested. Hooting of motor car horns, ringing of bells of cycle rickshaws, clip-clopping sound of horses harnessed to tongas and noises of other vehicular traffic rend the air. Very attractive posters displaying different kinds of goods sold in shops go up again. Activities in these areas go on till 8 o'clock in the evening. When the last group of customers goes and the shop doors and windows are shut the streets remain deserted again till next morning.

THE INDUSTRIAL ZONE

We divide the Industrial Zone in Delhi into two broad areas. They are called the Heavy Industrial Area and the Light Industrial Area. By the Heavy Industrial Area we mean the places where heavy manufacturing is carried out of bulky raw materials. The Light Industrial Areas are those areas where manufacturing is carried on in small units and the raw materials are

less bulky. The heavy industries we find in Delhi are : cloth spinning and weaving factories, iron foundries, large engineering works, chemical manufacturing plants, potteries etc. The light industries are hosiery manufacturing industries, wood industries, ice industries and tin-can works.

In the Metropolitan City of Delhi there are four Heavy Industrial Areas and one Light Industrial Area. The four Heavy Industrial Areas are located in the periphery of the city proper.

Of these, one Heavy Industrial Area (1) is located in Subzimandi, the second Area (2) along Najafgarh Road, the third (3) along Factory Road and the fourth (4) in Shahadara. The only Light Industrial Area (5) is located in Paharganj. All the other light industrial concerns are distributed in such a haphazard manner in the city that they cannot be grouped under any well-defined industrial area.

The first Heavy Industrial Area, in Subzimandi, has the following boundary lines. An arc drawn from Kishanganj station to Shakti Nagar along the southern border of Roshanara Garden on the north-west, Bahadurgarh Road on the south-west, Ice Factory, Bara Hindu Rao Road on the south-east, and Jawahar, Kamala Nagar and Chandrawal Road on the north-east. The area included within these boundary lines consists of three of the biggest cotton mills, namely, Birla Weaving Mills, Om Cotton Mills (now closed) and D. C. M. Mills; two of the biggest flour mills, Ganesh Flour Mills and Delhi Flour Mills, several tin-can industries, one enamel works, one of the biggest biscuit factories, about twelve hosiery factories, four ice factories, three large engineering works, two big chemical manufacturing works and about twenty small-scale industries.

The second Area, along Najafgarh Road, spreads along the Delhi-Rewa railway lines. This area is called the New Industrial Area. It was selected in 1937, as we have stated earlier, by the Delhi Improvement Trust as a suitable site for industrial development. The boundary lines of this area are : Ananda Parbath and Delhi-Rewa railway lines and yards on the south and south-east, Najafgarh drain on the north-west, Delhi-Rohatak Road on the north-east and Moti Nagar on the south-west. This area is still under development. At present there is one big cotton mill called Swatantra Bharat Mills, one of the biggest che-

mical factories, three iron foundries, three large engineering works, four sodium silicate works, a few hosiery and rubber goods factories and a few tractor assembling plants.

The third Heavy Industrial Area lies to the south of New Delhi. It is mainly a pottery factory area. Its boundary lines are : Factory Road on the north, Yusuf Serai village on the south, Muhammadpur on the west and Qutab Road on the east. In this area there are four large pottery works, five small works and about ten brick kilns.

The fourth Heavy Industrial Area is in Shahadara. It lies four miles to the east of the city proper and about a quarter of a mile away to the north-east of the main highway and the railway station. There are about seven big foundries, four sodium silicate works, four acid manufacturing concerns and a large number of miscellaneous works located in this area.

The fifth Area is the Light Industrial Area. It lies not far away from the residences of the Central Government clerks and also those of the low income group. All wood industries are located in this area. The boundary lines are : Mutiny Memorial Road and Idgah on the west, Original Road on the south, Paharganj Police Station and Sadar Bazar Road on the east and Idgah-Sadar Bazar Road on the north. There are about eighty wood manufacturing concerns located here.

All the areas described above have the general characteristic of industrial towns. The Subzimandi Area in particular is full of smoke and dust. Some areas like the New Industrial Area and the Subzimandi Area, where many of the iron foundries and the engineering works are located, are very noisy. Shahadara and also the New Industrial Area where some of the biggest chemical manufacturing concerns are located send out nauseating smells. There is a heavy and continuous lorry traffic carrying manufactured goods from the factories. Similarly, the railways are busy in bringing in heavy raw materials and in transporting manufactured goods.

The roads in these areas are narrow and dirty and the houses are small and congested. Small bazaars are found near the factories to cater to the needs of the workers. The roads are always overcrowded with industrial workers, some going towards the factories and others going away from them. Their

dresses look very dirty, very often smeared with grease and oil. Unlike the commercial areas these areas throb with activity day and night. Many of the factories here run day-and-night shifts and the noise does not abate to the change of the hour.

ADMINISTRATIVE ZONE

The two areas falling under the Administrative Zone are the Central Administrative-cum-Culture Area and the State Administrative Area. We have separated them here on the basis of the functions they perform, one in looking after Union affairs and the other, State affairs.

The Central Administrative-cum-Culture Area (1) is located in New Delhi. The boundary lines of this area are Kushak-Dupleix-King Edward Roads on the south, Queen Victoria Road-Parliament House-Church Road on the north, Wellington Crescent on the west and the southern half of Queensway on the east. This area gets separated into two halves by the open space along Kingsway.

We find all the Union administrative departments concentrated within the area defined above. The Central Secretariat and all other departments attached to the different Ministries are also located here. They are housed in rows of buildings. Within hundred yards from the Central Secretariat is the Parliament House where the Upper and the Lower Houses meet. In addition, we find several cultural institutions also situated within the same area. There are two museums, one in the President's House and the other at the junction of Queensway and Kingsway. A few yards away from the Parliament House is the well-known Chelmsford Club. About hundred yards to the north of it lies the Art Gallery. In the centre of Kingsway is the boating tank and at its end are the two parks, Jodhpur Park and Princess Park, and also the stadium.

The State Administrative Area lies in the northern part of the city. The boundary lines are Rajpur Road on the north-west, river Jamuna on the east and Under Hill Road on the south-east. We find all the administrative offices of the Delhi State located within this area. In the northern corner of this area lie the Delhi State Secretariat, the State Assembly and other de-

partments attached to them. Along Rajpur Road lie the offices of the Controller of Transport and the Health Authority.

All the areas defined above present a picture of the real life in administrative areas in cities. They hum with activity from 9 o'clock in the morning. Thousands of white-collar workers riding cycles head towards different offices in the area. Similarly, the buses and cars carrying the workers rush into these areas continuously. Boards bearing the various names of departments are found displayed before every building. In the evening after 5 o'clock the stream of cyclists and cars heads towards the residential areas and the crowded streets become deserted. However, the parks located in the eastern end remain full till about 8 o'clock with children playing on the lawns, couples chit-chatting and the elders relaxing on the benches.

RESIDENTIAL ZONE

We sub-divide the residential zone in the city into three areas based on the income and ways of living of the residents. These areas are : the Upper Income-group Residential Areas, the Middle Income-group Residential Areas and the Low Income-group Residential Areas.

The Low Income-group Residential Areas are found immediately off the main Business-cum-Commercial Area and from there it spreads towards the Industrial Area in the north-west. These areas are : Sita Ram Bazar—Hauz Khaz—Mori Gate Area, Paharganj—Multani Danda—Sadar Bazar—Bara Hindu Rao Area, Phul Bangash — Chandrawal Area in Subzimidí, and Model Basti.

Sita Ram Bazar—Hauz Khaz—Mori Gate Area runs in the form of an arc. The inner boundary lines are : Urdu Bazar—Chowri Bazar—Lal Qua and Naya Bans Roads. From there the line crosses Queen's Road and the railway yards and runs along Hamilton Road upto Kashmeri Gate Bazar Road. The outer boundary lines of the curved area are : the old wall of the city spreading from Delhi Gate to Ajmeri Gate. From there the boundary line turns towards the north and runs along G. B. Road and Naya Bazar Road upto the railway-yards. From the railway-yards it runs in a north-easterly direction along the wall

upto Kashmeri Gate. Eastern side of the lower end of the arc is bound by Faiz Bazar Road.

The second Area lies on the western side of the New Delhi railway goods yards. This area is more or less rectangular in form and is hemmed in by good residential areas from the south and the west. The boundary lines are : Kutah Road on the east, Old Gurgaon Road and Chitra Gupta Road on the south, the ridge and Bara Hindu Rao Road on the west and Delhi-Karnal Railway line on the north. From there a triangular patch spreads to the north-east between G. T. Road and Malkaganj. It ends with Birla Lines. From the same area there spreads out another patch along East Park Road upto Model Basti. The Wholesale Business Area in Sadar Bazar penetrates into this zone.

The largest number of families belonging to the lower income-group reside in the areas defined above. Those who live in Sita Ram Bazar, Paharganj, Multani Danda and Bara Hindu Rao are older residents of the city. There are a few groups of recent immigrants too. Many of them live in places to the north-west of G. T. Road. Some are displaced persons from Pakistan and others are migrated factory workers. Those living in Sita Ram Bazar area mostly work in shops, godowns and also in small-scale industries. There are some who earn their living by working in cottage industries such as shoe-making, tin manufacture, metal manufacture, copper and brass works, and in lametta works. In Paharganj area live people who work in house construction and also in wood industries. Besides them, we find carpenters, peons and poorly paid clerks of business concerns. Those living around Sadar Bazar area and also in Bara Hindu Rao depend on the industries in Subzimandi. Some work in cotton mills, many in hosiery factories, some—including women—in thread-ball industries and some in tin-can works.

One marked feature common to the whole area is the low room-rent ranging from Rs. 7 to Rs. 15. The dwellings are single-room family dwellings. The houses are of the poorest quality. They are very old and are in dilapidated condition. The streets are dirty and filth lies scattered everywhere. Many of the areas lack civic amenities. In areas like Sita Ram Bazar and Paharganj the buildings lie very close to each other. Very narrow lanes wind between them, so narrow that any one can

touch both the side walls at the same time. In some lanes no two people can pass. One has to wait in a house doorway or stand flat against the wall of a house for the other person to pass. There is hardly any light in these lanes. Some live in mud huts with gaping roofs made of straw, flattened kerosene canisters, rotting rags and jute sackings.

The people are very poorly dressed and live in rooms huddled together. Many take only one full meal a day of very low nutritional value. Their recreational activities are confined only to the house-limits.

There are three more Low Income-group Residential Areas on the peripheries of the city. One area lies between Dharpur Road and Radio Colony, another at Gurkimandi village near Jawahar Nagar and the third between Jangpura and Okhala. Generally the pig rearers, the Jats and labourers employed in building construction industries live in them.

There are several Middle Income-group Residential Areas in the city. Many of them are located on the outer side of the Low Income-group Residential Areas. The first Area is located behind the factory zone in the north-western part of Subzi mandi. At present it goes under the three names Jawahar Nagar, Shakti Nagar and Kamala Nagar. Jawahar Nagar and Kamala Nagar lie on the north-eastern part of G. T. Road and Shakti Nagar in the west. The boundary lines of these taken together as a whole are : Birla Mills and Birla Lines on the south east, University Campus on the north-east, Gurkimandi village on the north-west and Delhi-Karnal railway lines on the south-west.

The second Area lies in Karol Bagh on the west. It spreads between the Ridge and Ananda Parbath. The boundary lines are : Ananda Parbath on the north-west, Delhi Ridge on the south-east, Shadipura Road on the south-west and New Rohtak Road on the north-east.

The third Area is in New Delhi. It spreads from Panch Qua Road on the north-east to Talkatora Road on the south-west. The north-west boundary line is Reading Road and the south-west line is Parliament Street.

The fourth Area lies to the south of New Delhi. One area spreads along Delhi-Mathura Road. It spreads from Wellesley Road-Mathura Road Junction to Jangpura. On the eastern side

of this strip of land is a tract more or less a jungle and on the west is the river. The breadth of the occupied area on either side of Mathura Road is about half a mile.

The fifth Area is the Lodi Colony. It spreads between Lodi Road and Kutab Road.

The sixth Area is the Vinaya Nagar lying to the south of Wellington aerodrome. It is located between the aerodrome and Factory Road. On the east is Kutab Road and on the west is Muhammadpur village.

The seventh Area is located in Daryaganj. Its boundary lines are Lower Bela Road on the east, Faiz Bazar Road on the west, the old city wall on the south and Anzari Road on the north. This is a newly built-up area.

The eighth Area is near Bengali Market in New Delhi.

Almost all the residents of the areas defined above generally belong to the middle income-group. Majority of those who live in Kamala Nagar, Jawahar Nagar and Shakti Nagar are clerks working in commercial firms and in mills, teachers in colleges, doctors, hakims etc. Majority of those living in Qarol Bagh are clerks and officers of commercial firms. Some are officers in government departments. Some are clerks working in factories in Subzi mandi and in the New Industrial area. The residents in Nizamuddin and Jangpura are also clerks and officers of commercial firms and government departments. Almost all the residents in Lodi Colony and Vinaya Nagar are clerks working in the Central Secretariat, though there are a very few officers too. Some of those living in Daryaganj area are in the upper middle income-group. However, as there are a large number of wage earners whose monthly income is moderate, we have grouped the area under the middle income-group residential areas. Some of the residents here are businessmen, some are teachers, some are clerks, some are executive officers in commercial firms, some are lawyers and some are landowners.

The residents of almost all the areas stated above are also recent immigrants. Some are those who have migrated from the crowded areas in the old city. The houses in most of these areas are good for living. They are built according to flat-system and each flat containing about two or three rooms is occupied by one family. The rents of the flats in all the areas are

more or less uniform. They range from Rs. 65 to Rs. 120 a month. The health and sanitary services are also good. Many of the residents use bicycles for travelling and only a few possess cars. Some depend on omnibus services. There are small retail shopping centres in all these areas. Cloth, ready-made clothes and also other millinery goods at low prices are sold at these shops. Some of the well-known shopping centres are Ajmal Khan Road Market in Qarol Bagh, Gole Market near C & D quarters in New Delhi, Subzi mandi Market in Subzi mandi, and Bengali Market near Barakamba Road. Many of the residents in these areas generally do not employ servants. Their income does not permit them to do so. In the morning and in the evening they do their own marketing. For recreational purposes they do not travel very far. Club activities run at a very low scale. They have not enough time and also money to enjoy leisure.

The third Area under the residential zone is the Upper Income-group Residential Area. This area extends in an arc form from the eastern side of New Delhi to its southern and the south-eastern periphery. It begins from Connaught Place and runs south-east between Barakamba Road and Queensway upto Kingsway. From there it girdles round the Administrative-cum-Culture Area which has been described earlier and spreads towards the south-west. The boundary lines of the first area upto Kingsway are: Barakamba Road on the north-east, Queensway on the west, Asoka Road on the south-east and Lytton Road on the east. The boundary lines of the south-west area are: Shahajahan-Prithviraj Road on the south-east, Roberts-Safdarjung Road on the south-west and Duplex-King Edward Road on the north-west. There is another triangular strip running towards the south from Kingsway. It spreads between Wellesley Road and Delhi-Mathura Road to a distance of about half a mile in the south.

We mark another narrow Area in Civil Lines. It consists of several residences of persons belonging to the upper income-group and four upper class residential hotels. This area was formerly occupied by the European Officers of the Government of India. Even now a large number of Europeans who are temporary residents in the city stay in the hotels. The old colonial

type of bungalows are occupied by some of the high State Government Officials. The boundary lines are : Rajpur Road on the north-west, the old wall of the old city in the south, Alipore Road on the east and Under Hill Road on the north.

The elite of the City of Delhi live in the areas defined above. Specially the area in New Delhi is thinly populated and looks very beautiful with sweeping avenues and fine ultra-modern villas. A few of the large houses located near the lawns of the Kingsway which were formerly owned by the Princes of India have recently been taken over by the Union Government to house administrative offices. Some of these are : Travancore House, Baroda House, Hyderabad House and Jaipur House. These houses situated on the southern side of the Kingsway are occupied mostly by highly paid government officials, rich industrialists and businessmen. In the triangular area between Wellesley Road and Mathura Road reside businessmen, highly paid executive officers of industries, of banks and of insurance companies, rich lawyers, landowners and also some representatives of foreign embassies. This area grew up only during the course of last five years.

Many of the houses in this part are either single family residences or two-family residences. The rent of a flat in all these areas is very high ranging from Rs. 400 and upwards. Nuisance created by factories or heavy motor vehicles or railways is completely absent. The parks and the clubs are not far away. The residents have enough money and also time to enjoy their leisure. Holding of parties or entertaining of guests and other recreational activities are very common society features among the residents in these areas. Many of the residents possess cars. The atmosphere suggests peace and contentment.

CULTURE ZONE

There are two areas which can be grouped under Culture Zone. One area lies in the heart of the city and the other in the northern parts. The first Area (1) is located near Chandni Chowk and is confined to the limits of Queen's Garden. The boundary lines are : C. M. Road on the west, northern portion of Elgin Road on the east, Chandni Chowk on the south and Queen's Road on the north. Within this area we find five recreational

clubs run by the inhabitants of the locality, two public libraries--Hardinge Library and Delhi Public Library, one high school and one primary school, several playgrounds for children, public lawns, one church and five cinema houses.

The second Area (2) is Delhi University Campus. The boundary lines of this Area are: Probyn Road on the west, the ridge on the east, the Imperial Avenue on the south and the Mall on the north. Many of the institutions affiliated to the University of Delhi are located here. Some of them are the Central Institute of Education, Delhi School of Economics, the University Law College, Hindu College, Patel Chest Institute, Miranda House for Women and also St. Stephen's College. Several hostels, too, are found here. Some of the buildings belonging to other educational institutions are under construction now.

Both the areas bear the typical characters of culture centres. In the first of these are located the public libraries where people go to borrow books and also for reading the daily newspapers. These libraries are kept open till about 8 o'clock in the evening. The playgrounds become full with children during the off-periods in the schools or when the classes are over. The club life in the first Area becomes very active in the evening after 5 o'clock when the members get together to play a game of cards, badminton or chit-chat or to enjoy a drink at the bar. The areas where cinema theatres are located come to life in the evening when the shows start. Sometimes public meetings and also exhibitions are held in the lawns near Harding Library.

The activities of the second Area begin after about 10 o'clock in the morning. All the graduate and undergraduate students move that way at this time when many of the institutions located in the area begin their work. Some students move in batches from one area to the other to attend lectures or to visit libraries. On some occasions public lectures too are given here and many people from outside come to attend them. Some students flock into the coffee house or to the canteen. During off hours some play games and some sit under the shady trees and study. And thus the whole life in the area goes on till 7 o'clock at night.

COMMUTERS' ZONE

There are several areas coming under the Commuters' or the

Dormitory Zone. They lie on the suburbs of the city proper. Here we shall be describing the location of such areas without giving the exact boundary lines of each area as they cannot be easily demarcated.

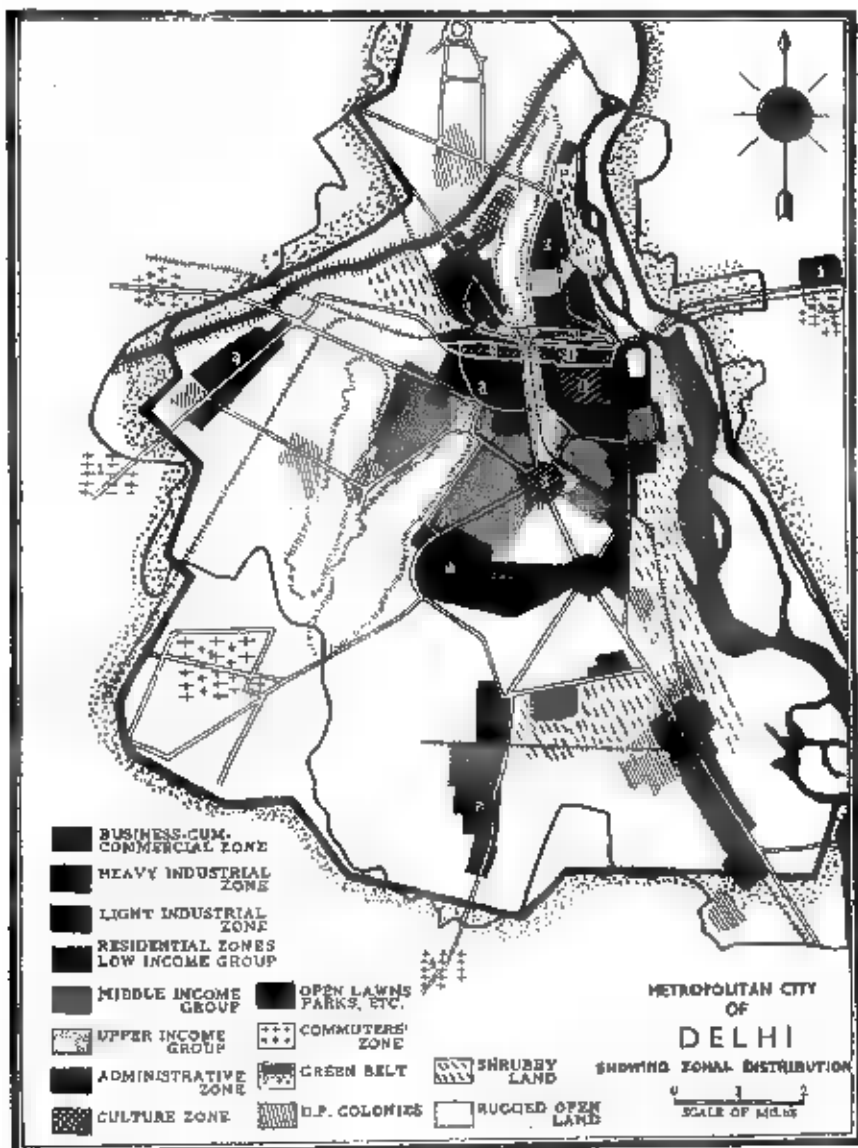
The first Area is Tilak Nagar (1) along Najafgarh Road. It is located about three miles away to the west of the built-up area of the city. In between them there stretches a belt of beautiful agricultural lands. A regular half an hour to 45 minutes interval bus service runs to and from the city. Most of the residents work in government offices, commercial firms and shops in the city. Everyday they come in the morning and return home in the evening at about 7 o'clock.

Shakurbasti (2) is another small dormitory town located along Rohtak Road in the north-west. It is about three miles from the main built-up area of the city. A piece of agricultural land separates the two. Many of the residents in this township work in the industries at Subzimandi. Some work in schools and shops in the city. There is a railway and also a regular one to one and a half hours interval city bus service running between this town and the city. The residents come to the city for work by bus or by train in the morning and return home in the evening. There is a commuting population of about 1,000 people residing here.

The third Commuters' Area Shahadara (3), is located about four miles away in the east. It is served by both railways and buses. There is a regular fleet of other passenger vehicles, too, running between this town and the city. People of this town depend wholly on the city of Delhi. Many of the residents work in banks, in business concerns, in civic offices and also in government departments located in different parts of the city. There are about 5,000 daily commuters residing there. At present a regular 15 to 20 minutes interval city bus service runs between the city and this town. There are one-hour interval regional train services touching this place.

The fourth Commuters' Area Meherauli (4), is located in the south-western part of Delhi. It lies along Delhi-Gurgaon Road and is about five miles from the built-up area. There is a rocky non-agricultural land in between this town and the city. Many of the commuters from this area work in government

Figure 12





offices, building construction industries and also in commercial firms. About 600 people come to the city in the morning for work and return home in the evening. There is a regular half an hour to one-hour interval bus service between the city and this town.

The fifth Area is Cantonment (5). It lies about two and a half miles away to the west of New Delhi. There is an inter-commuting population here. Many of the residents of the Cantonment commute to the city for employment and some from the city go there for work in military areas and also in the Palam aerodrome. There is an average daily commuting population of about 3,000 people to the city and about 500 to the Cantonment area. They come or go in the morning and return in the evening. A large number of people travel on cycles and some in buses. There is a regular 15 minutes to half an hour interval bus service between the city and Cantonment.

GREEN BELT

Girdling the present built-up area of the city is a Green belt. This Green belt can be divided into Agricultural Areas and Non-agricultural Areas. Here we will be pointing out the names of the villages constituting these areas.

The Agricultural Areas generally lie on the north-western, western and south-western parts of the city. On the north-west there are the villages Haiderpur, Sahipur, Pitampur and Puth Kalan. On the west are the villages Nangal Raya, Nasipur and Dabri. On the south-west are the Maheram Nagar, Mahipalpur, Shahajahanpur and Shahpur Jat. The land to the south upto Okhala and even beyond that is unfertile non-agricultural land. Some areas are under forest. In some parts the land is very dry and rocky. The land between Shahadara and the city too is non-agricultural and only a few groundnut and barley fields are found there. This three to four-mile broad ribbon of grassy land runs from north to south to a distance of about 10 miles. Some of the villages included in this belt are Ghazipur, Palperganj, Biharipur and Khajuri.

All these areas under the green belt look very beautiful throughout the year. There are shady trees dotting here and there and the green land spreads for miles and miles. The land

spreading to the west of Cantonment looks like a soft carpet of greenery when the wheat plants are of tender age. Some areas turn to beds of flowers during the flowering season of the mustard seed plants. Studded here and there on the soft carpet of greenery are the farmsteads where the Jats breathe the intoxicating fresh air blowing over the barley and wheat fields. The continued existence of this peaceful atmosphere is being threatened today by the expanding city.

The evidence presented in this work is sufficient to bring out some of the main features of the present ecological pattern of the city. They are as follows: (1) At the centre of the city lie the main retail and wholesale business and culture zone; (2) immediately beyond this zone lies a semi-circular zone, physically deteriorated, where we find most poverty, slums, sexual vice and crime. In an outer-ring of this zone separated by the railway yards lies a similar deteriorated residential area of the factory and shop workers. Two wholesale business areas running along arterial roads penetrate into this zone. (3) Behind this zone of poor residential areas lies the zone of better residential areas. The areas of this zone are separated by man-made barriers such as rail-roads and big reserved gardens. (4) The best residential zone runs in a crescent shape far away from the business and heavy industrial zones. (5) Beyond this lies again a zone of better residences. (6) Separated by patches of green belt on the outer region lies the commuters' zone. (7) The industrial zones lie along the main arterial roads on the peripheries of the city.

In addition we note that the topographical features have exerted a powerful influence on its shape. A natural barrier such as the river Jamuna has upto now restricted the expansion of this city to its east and the present tendency is to expand along the river into the plains in the south.

We have endeavoured in this study not just to paint an ugly picture but rather to examine the question of the social needs of the inhabitants of Delhi in order to provide a satisfactory basis for the future life of the city. A closer examination of all our findings leads us to one crucial point. It is the following. There is some apparent maladjustment in the current city life and also in land use for which some corrective measures are very badly necessary.

We find that because of the uncontrolled growth of population and spatial expansion in a most haphazard manner, Delhi has become too big to have any real community life. It suffers from all the disabilities of over-concentration which are quite clearly evidenced from the deteriorated areas, and also from the areas which have almost, if not entirely, slum conditions, in the congestion of traffic in the streets, in the overcrowded buildings, narrow roads, deplorable insanitary conditions and lack of open spaces. It is very necessary to remedy all these defects quickly and replan and reconstruct to meet the present-day requirements.

In any proposed reconstruction scheme we have to see that provision is made to satisfy fully all the living and cultural demands of the total estimated population. This raises the general question: What is the best size of the Delhi city to provide all such amenities, and to make of it the best possible national capital to which civilized men could readily go and settle down. What indeed, should the proposed population be? Should it be 5,000,000 of people—the figure selected for Moscow in 1935 or should it be 30,000 people—the figure suggested by Ebenezer Howard as an ideal in his *Garden Cities of Tomorrow*? The proper answer will emerge out when we estimate the number of people which it would be possible to accommodate within the occupied space available at present, while satisfying certain standards laid down.

Imagine the city as being reconstructed after a well-planned model. Then in the process of improving the present urban structure, let us proceed first of all to adjust the present

congested areas in the city. For this reconstruction we divide the area under the Old Delhi city into five zones such as the inner zone, the inner-outer zone, the middle zone, the middle-outer zone and the outer zone. All these zones generally correspond with the housing areas we have described in an earlier chapter. The following spatial areas will be allotted to different types of zones. In each zone we include the area of the present built-up land and the area of existing parks. These areas of zones are as follows : inner zone, 498 acres; inner-outer zone, 477 acres; the middle zone, 1,132 acres and middle-outer zone, 781.8 acres. We have not put any limitation on the outer zone as it would be utilized to accommodate the present overspill population. According to our estimate the population and housing density per acre based on an average of 3.6 persons' per house or flat in all the four zones of development should be 172.8 persons in 48 dwellings in the inner zone, 115.2 persons in 32 dwellings in the inner-outer zone, 57.6 persons in 15 dwellings in the middle zone and 21.6 persons in 6 dwellings in the middle-outer zone. The same area and population density of the middle outer zone can be introduced in the development of the outer zone too.'

According to these calculations there will be three acres of park area for 1,000 persons in the first zone where there is shortage of space and where the land prices are exorbitantly high; in the second zone five acres of park area for 1,000 persons; in the third zone seven acres of park area and in the fourth zone ten acres of park area. Based on these estimates the net density of the whole area will be 54 persons and the gross density 34 persons per acre. A square mile of area will have a total density of 21,760 persons. The total population which it would be possible to accommodate in the present Old Delhi area based on our estimate is 151,170 persons and the area of open spaces and parks will cover 805 acres. This brings an overall park area of 5.1 acres for 1,000 persons. Now one might well ask why there is a smaller size of park area in the centre. Our answer is that if we allow more it will turn merely into a mass

1 *Census of India, 1951, Vol. VIII, Part I-B* gives 2.675 persons per household.

■ This plan is only for the area under the Old Delhi Municipality.

surgery of roads and parks with the consequence, too, that it would cease to be a place replete with commercial and cultural life.

Accommodation of one and a half lakhs of people in this area means that there will be an overspill population of no fewer than seven and a half lakhs of persons. It is about 83% of Old Delhi's present population. This overspill population will have to be housed outside of the present built-up area. If we are going to allow a density of 21.6 persons per acre in the outer zone too, we would require about 54 square miles of area to house the overspill population. This area has to be selected either from the south or from the west of the present metropolitan city. The conditions of the space available in the north and the east of the city in order to extend the residential areas are not favourable. The land towards Azadpur in the north is marshy and malarial.¹

The land between the city and Shahadara town in the east is low and subject to annual inundation. Extension of the city to the available land in the west beyond the Cantonment means the occupation of good agricultural land and, further, as these areas will be far away the extension of sanitary services like sewage and water will become more difficult. If the area is extended to the south beyond Yusuf Serai and Okhala villages, it would spoil the beautiful green belt spreading upto Tughlakabad. Moreover, a population whose main livelihood is expected to depend on the industries and business in Old Delhi will be so housed as to be about eight miles away from these areas. On the other hand, if the residential parts of the present city are extended without any discontinuance and if they thereby shift the present green belt back, access to the country of the people residing in the central zones will become difficult.

Because of these aforementioned unfavourable conditions we feel that if a proper check is not put on the present growing population the situation will aggravate and the difficulties will be all the more. Should the population be limited to a certain optimum pre-assigned size and then the entrants be regulated by a passport system as was done in Moscow² or should new

1 See, *First Report of the Delhi Town Planning Committee*, (1913).

2 See M. F. Parkins, *op. cit.*, p. 42, and also E. D. Simon, *op. cit.*

satellite towns be opened up in the suburbs to accommodate it and offer all the facilities to make life easy? The former method of checking population flow cannot be introduced in a democratic state like India and we are, in general, in favour of the latter. In the former case we learn that in spite of the positive restrictive measures imposed on Moscow through the application of mechanical means, the population began to grow. Therefore it stands as a warning against the application of mechanical restrictive measures in the reconstruction of our cities. We feel that the opening of good opportunities by suburbanizing industries and other works may absorb to a large extent the majority of the present overspill population. This topic will be discussed later. .

In the rehousing schemes our object should be to form residential localities into good neighbourhoods. The City of Delhi and other neighbouring towns leave very much to be desired in this respect. The idea of a good neighbourhood, according to our plan, is a physical arrangement of houses and other institutions in a well-defined area which will go to improve the general welfare and create a beneficent environment where all the needs of all ages, classes and interests would be provided with the maximum convenience, safety and amenity. In the neighbourhood, the schools should be located in an area which will enable the children to go and return from school without crossing any heavy traffic street and should lie within the walking distance of their houses. The daily marketing centre should be within easy walking distance—convenience of great importance to the housewife, and it should also be a place where the husband could get convenient transportation to and from his place of work. It should also be well-equipped with playgrounds for children to play in safety and have parks and other open spaces for older people. In all it should be a place equipped with all social services in order to make the residents feel more aware of belonging to one place and feel more neighbourly to others than those people living at present in a vast mesh of roads and houses.

More than these we have to remember that there should be a sort of 'social health' among the various groups of people living in the city. If we glance at a social map of Delhi City (see figures 8 and 12) specially that of New Delhi, we observe that

there is an almost planned physical segregation of various income-groups, where the residents of one quarter of the city do not know how the other quarter lives. This is most undesirable for a community which has suffered from caste segregation for so many centuries. If we are dreaming to attain a socialist pattern of society and foster the democratic spirit we must condemn this sort of physical segregation in large quarters of various income-groups and take greater care to plan the physical organization in order to bring various groups together for co-operative endeavour. In addition the new planning should be so designed as to embody the vital concept of neighbourhood by making it possible for face to face contacts.

The institutional equipment of a neighbourhood generally depends on its population size. We suggest here two types of neighbourhoods for Delhi. One is a super-neighbourhood and the other a sub-neighbourhood. A super-neighbourhood consists of several sub-neighbourhoods. They are separated here because there are certain institutions which a super-neighbourhood can maintain and there are others which a sub-neighbourhood can maintain. The size of the sub-neighbourhood should be such that it would maintain a single primary school, one high school and one or more children's playgrounds. A size of the super-neighbourhood should be such that it would maintain one senior high school, a hospital, one cinema theatre, a theatre hall, a big park and an adults' recreation ground or stadium. On this basis we suggest that a super-neighbourhood in Delhi should contain about 10 to 12 thousand persons and each should be divided into four or five sub-neighbourhoods, each consisting of an average population of 2,500 to 3,000. The English planners include about 6 to 10 thousand people in a neighbourhood. Chicago planners choose a range of 4 thousand to 12 thousand persons. The Russian planners divide the whole into two groups—the residential super-block (*Kvartal*) which is considered as the basic neighbourhood in Soviet city planning, and a group of such super-blocks included in a residential district (*Mikrorain*). A *Kvartal* houses about one thousand to four thousand people and a *Mikrorain* a population of about four thousand to ten thousand people.¹ We do not prefer to have

1 A *Kvartal* is provided with required public facilities and services including nurseries, kindergartens, schools, playgrounds, a post-office,

more than 12,000 people in a super-neighbourhood as a population denser. More than that will result in its members never knowing each other and will provide no opportunities for intimate contact.

In the physical planning of the neighbourhoods we have to note what form of physical layout of houses in the area would bring the maximum contact of people. From our short survey of the neighbourhood feelings of two groups of residents in Delhi City, though not absolutely decisive, we conclude that besides some other factors, the residents who live in the proximity caused by naturally formed *cul-de-sac* layout play an important factor in the development of neighbourly feelings than amongst those who live in separate open areas cut off by heavy traffic streets as in New Delhi.

Professor R. K. Merton has pointed out in his study of Craf-ton that there is an architectural determinant of friendship formation by physical propinquity and house orientation.¹ This has been corroborated by Mr. Leo Kuper in his study of the Braydon Road residents in Coventry and also by Messrs. Leon Festinger, Stanley Schachter and K. Back in their study of the West Gate and Westgate West housing communities. The latter study indicates that the building relationship such as direct relation building arrangements are major determinants in friendship formation and thus in formation of Social Groups.² They state that "physical distance is only one of several ecological factors which can operate in a similar fashion to effect the occurrence of contacts and consequently to affect the development of friendships. One class of such factors we shall call functional distance. These factors arise from the arrangement and the positional relationships of houses, required paths which must be used in going to and from particular houses, common access to facilities and similar design features. The presence of such functional con-

dining halls and shops. A *Mikrorain* is served by a junior high school or high school, a park, athletic fields and playgrounds, a polyclinic, public baths and other public and communal buildings and institutions. See M. F. Parkins, op. cit., pp. 32, 123, 124.

1 R. K. Merton, "The Social Psychology of Housing" in *Current Trends in Social Psychology*. Ed. W. Dennis, (1948).

2 L. Festinger, S. Schachter & K. Back, *Social Pressure in Informal Groups*, (1950).

nctions between two people will increase the probability of the occurrence of a contact between them.¹

We firmly believe that the *cul-de-sac* form of housing layout is more suitable for Old Delhi because many of the people living in Old Delhi for generations have got used to live in such form of residential areas. Moreover, the *cul-de-sac* form provides a simple method of planning the houses of a unit off the main road away from traffic circulation.

But we have to remember that the *cul-de-sac* form of housing layout is good only in our zones where the density is low and the dwelling type is generally detached or semi-detached houses. Now we must ask what type of layout is good in zones where the density is high and where the land for housing is very much limited. Should there be flats or "terrace houses"? Our suggestion is that there should be flats specially in Delhi for several reasons. One is that the flat makes more economical use of the space and communal facilities can be provided easily. The other is that there are many in Old Delhi who have got used to live in flats than in detached houses. However, we have observed in our enquiries that many of the middle income-group residents in New Delhi are not in favour of this plan. For instance, when we questioned some residents in Gole Market area they argued against it. Some think that it would bring about clashes amongst the occupants because of bad civic habits like throwing dirt from the upper floor. But such minor drawbacks can be corrected by teaching people good civic habits. Some individuals from Madras expressed their preference to live in detached bungalows just as they live in Madras. Such detractors are only a few.

Since we suggest here several sized houses, it must also be seen that such a planning does not result in the beauty of the city landscape being spoilt. Today, if we look at the Metropolitan City of Delhi as a whole, we find that there is a distortion of the city landscape by the haphazard growth of buildings, low

1 Physical distance is measured distance and the functional distance is measured by the number of passive contacts that position and design encourage.

2 A terrace house is any house in a continuous row of three or more as defined by the British architect Frederick Gibberd, see *Town Design* (London, 1955).

and high in different parts of the city. For instance, a person looking over the city from Jama Masjid or the ridge will observe single blocks of three-storeyed buildings rising suddenly in the skyline where there are only ground floor houses. This ugly feature should be obliterated by a uniform group of structures five to six storeys high in high density areas at the centre and gradually spreading out and levelling off to the periphery and ending with ground floor bungalow types or cottages.

In the construction of houses or flats we have to consider how much area should be allotted for each family, for family is the basic unit of our study. We have to ensure that the inhabitants who are going to live in them will have proper space about their dwellings for light and air and enough space and quietness within. In our chapter on Housing we pointed out the shortcomings of the State-aided houses built for slum dwellers in Delhi. It would be better if the houses are brought into proper standards so that the occupants may not get a sense of being fenced in. Frequent contacts in narrow space generally result in irritation, friction, nervous tension, and later leads to other forms of psychological disturbances. Svend Reimer in his study of housing in Seattle, Washington, points out that family friction and personal tensions increase with crowded living conditions and the frequency of close personal contacts in small spaces.¹ Though we have not conducted any detailed enquiries the conditions in Delhi could not possibly be any better. On numerous occasions we heard complaints pertaining to personal inconvenience and family friction caused by overcrowding. To fit the general conditions we advocate a minimum size of 120 square feet of area of space per single room dwelling with a small verandah in front and a kitchen covering an area of about 60 square feet at the back. If it is a double-room dwelling there should be a minimum of 240 square feet of floor space excluding that for kitchen, dining room etc. In Russia the multiple and two-storey dwelling apartment contains a two-room dwelling unit of 260-350 square feet of area excluding the space for kitchen, bath etc.² We observe that in housing for the poor it is a com-

1 Svend Reimer, "Maladjustment to the Family Home," *American Sociological Review*, Oct. 1945, pp. 642-48.

2 M. F. Parkins, op. cit., p. 61.

mon practice in Delhi to provide a small single room and an open front verandah for cooking. A primitive type for the national capital! When allotting the houses to the occupants care must be taken to allot single floor houses and the ground floors and first floors of storeyed buildings to families with children and also retired men and women. The young men and women, newly married couples and others should be encouraged to stay in the upper storeys of dwellings.

The next question that we have to answer is : What institutional facilities should be provided in our neighbourhood—super or sub—proportionately to the population? According to the present age composition, we can state that in a 12,000 population, if we are to take the optimum number, there will be about twelve hundred of five to nine year olds. This means a sub-neighbourhood would have about 200 to 250 students which will be a good size for a primary school. Today the primary schools in Delhi are extremely overcrowded and hold two sessions, morning and evening, to cater to the needs of the students. But we are not in favour of this two-session schools for two reasons : firstly, children are thereby deprived of the opportunity that they should get for recreation with the elders and with those of their own group in the evening and secondly, the school playgrounds are not made available as a part of the playgrounds that the small children need for recreation.

Similar are our proposals for children's parks and playgrounds in the neighbourhood. In the chapter on recreation we pointed out the general shortage of parks and playgrounds. The two major defects in regard to open spaces and neighbourhood parks in Delhi at present are : firstly, the existing parks and playgrounds are inadequate according to the present standards and, secondly, those which exist are not sited best to suit the needs of the people who live in different areas. The function of a neighbourhood park and playground is to offer recreational facilities for children and rest and relaxation for adults. They are specially needed in crowded quarters where the street is unsafe for play and where there are heavy traffic barriers.

We note that even public authorities upto now have not been keen on making a systematic attempt in order to keep pace with the rapidly growing population in the city. This is true of

New Delhi also. It is sometimes argued that as there are lawns in fronts of houses in New Delhi there is no need of central neighbourhood playgrounds for children. But even under such conditions we are of opinion that a playground and a park of suitable size are necessary in order to bring all the children of the neighbourhood together under trained leadership where they can learn games which can be played elsewhere and thereby develop good sportsmanship. On the other hand, play in plain lawns may not go a long way to have a full sway over a child's imagination. Also, lack of expressions may not help to eliminate some of the tensions and fears that are felt by youngsters. Hence there must be playgrounds with materials which will go to stimulate imagination of children beyond the immediate fun of swinging, see-sawing or sliding down in a slope. Some of the equipments we suggest are huge concrete elephants, camels and turtles, tunnels and bridges and fantasy villages containing a house, temple, firehouse, store etc. At present there is only one such sculptured playground behind Birla Temple.¹

Space requirements for children's playgrounds demand careful study. In Delhi, specially in the Old City, the space currently available for a child in a playground is very small. This has been already indicated in the chapter on Leisure and Recreation. A fair standard in a properly equipped playground is about 100 square feet of space for a child. The New York Regional Plan suggests a play space of 750 square feet (25 feet x 30 feet) for one to five children.

One of the important recreational agencies that a neighbourhood of the present city lacks is the cinema. It is an agency which plays an important part in the urban life and as it is cheap and offers variety it enjoys wide popularity today. Majority of those existing cinema theatres are concentrated in the commercial centres and only a few in the residential neighbourhoods. Therefore our super-neighbourhood should have at least one cinema theatre having 800 to 1,000 seats. Similarly there should be a temple, church and a mosque to satisfy the spiritual needs of people of different religious groups who are expected to live there.

¹ I have seen children riding on fantasy elephants, creeping through the mouths of lions, tigers etc. with great enthusiasm.

In the neighbourhood replanning schemes it has to be remembered that Delhi, like any other city in India, will have a low-income detached immigrant population with whom vice is a likely companion. This is an important point which neither the Improvement Trust nor the New Delhi City planners have ever taken note of. Provision of cheap housing units for them on the periphery of the city is a necessity. An ordinance requiring cheap tenements in every factory or workshop where they are employed could go far towards solving this problem.

We now turn to an important topic reserved for discussion at a later stage, namely, the city centre. It is the most important spot in a city. It is expected to be the chief business, administrative, entertainment and culture centre of the whole metropolitan area. As an administrative centre it is the meeting place of the City Fathers and as a business centre it is a place which provides shops displaying wide variety of choice particularly in luxury articles; as a cultural centre it is the place where people go to see the latest films, to borrow or read latest books or attend public meetings or exhibitions. It is the meeting place for the population as a whole for election purposes, the celebration of important anniversaries and the worship of or giving thanks to God¹ and also it is the foci of the whole circulation system with the bus terminus and the railway terminus located nearby.

Delhi's Chandni Chowk satisfies all these requirements. It occupies a place of pride among the sites and areas hallowed by historical personages in which Delhi abounds. For it was through this place that Shahjahan the founder of the city rode in procession with regal splendour; it was here that Aurangzeb held public fairs. It was through this street that Nadir Shah after his bloody massacre rode out in triumph. Even to this day are extant monuments connected with their names reminding of its past glory and civic identity. But we are sorry to point out here that it remains today a completely neglected spot. No attempt has been made to revitalize its life and the lost glory. Today this centre as a whole is far from being worthy of the capital of a sub-continent having 400 million people. The streets are dirty.

1 F. Gibberd, *op. cit.*, p. 47.

and congested, the buildings are old and lie in dilapidated conditions and blight has eaten deeply into it.

In Russia and other countries the first preference in planning was given to the planning of the city centre as the administrative, political and social core of the city. For the city of Delhi we suggest that in order to satisfy the civic functions there should be a dominant landmark which may tower over all other buildings and should be one which the people of the city could take most pride and keep it constantly alive. The city centre should also be a central place for the movement of parading troops and for throngs of people on holidays and on important occasions. The main town-hall situated along Chandni Chowk today is not at all an impressive one. It is being overshadowed by other three to four storeys high commercial buildings.

The Chandni Chowk Road should be widened and should be reserved only for large departmental stores and also for commercial firms. The narrow alleys jutting into it should be widened and straightened and reserved for all the speciality shops displaying all kinds of goods. Measures should be taken to facilitate accessibility to the retail business areas here. Suitable car-parks should be constructed not far away from these areas as they are essential to the preservation of retail business in the area.

The retail business area should be kept confined to the limits as they are existing today by converting the present Chowri Bazar Road into an inner circular road. This road should in general define the central area and should also make unnecessary for traffic not having business in the area to enter it. The present Lal Qua Road should be widened and straightened and allowed to meet C. M. Road at the Fatehpuri Mosque end. The C. M. Road should be allowed to act as an outlet road to the vehicles going out of the area of shopping.

Chandni Chowk is also the city's main entertainment centre. We note that because of the concentration of five cinema theatres in the eastern end, the whole area becomes very crowded in the evening. These theatres should be redistributed in the area. One cinema should be opened on the western side to function with the theatre existing at present and two should be opened on the southern part of proposed inner circular road, at present called Chowri Bazar Road. This would bring the theat-

res nearer to those people residing in Hauz Khaz-Sita Ram Bazar areas. Several more cinema theatres should be opened in other residential areas too.

There should be good cafes and restaurants in the inner zone whose lack makes the general shopper and the other visitors not stay long. Similarly, there should be a large number of fairly cheap, comfortable and efficient lodging houses to accommodate tourists and travellers.

In the reconstruction of the central area not a single ancient monument should be pulled down. In our talks with the inhabitants we found that they have a great sentimental attachment to these spots. And they also remind the inhabitants of the heroic periods, Delhi's glory and progress. Therefore they should be restored fully and kept as historic monuments. No city would be complete without them. Of course, they would diminish the space available for productive uses. But it should not be forgotten that these monuments if preserved well would bring good income as they attract tourists and travellers.

One of the foremost problems that the planner of Delhi City has to face is the planning of industries. They have grown up in the city in such a haphazard manner that they need a complete replanning. Delhi's industrial structure in many ways differs from that of other important cities in India. It has a large share of small factories and workshops and a small share of big factories employing more than 200 workers. We find that those which employ more than 200 workers generally lie on the outskirts of the city and the smaller factories located in a disorderly manner in the other parts, especially in Old Delhi. All of them should be brought under a particular plan so that they would cease to be a great menace to the health and cleanliness of the city.

The smoke emanating mostly from the industrial centres has become the chief cause of air pollution. The signs of the effect of smoke on the health of the people, have begun to appear now. Of the total number of deaths caused by various kinds of diseases in 1952, about 29% of monthly deaths are due to respiratory diseases (See Appendix III).

A study of the location of heavy manufacturing industries in the city shows the degree to which the various industries are

dependent on the communication lines and raw materials. For instance in Subzimidandi area there are the heavy manufacturing industries like foundries, cotton mills near the railway-yards and in the south there are the pottery works located near the source of their raw materials. All of them should be allowed to retain their position as far as possible excepting some of those lying in the midst of thick residential areas which should be shifted away. For instance, the cotton mills, flour mills and engineering works situated in Industrial Area No. 1 have become a great nuisance to the residents because of the noise, smell and dust created by them. They should be shifted to the New Industrial Area selected by the present Delhi Improvement Trust. But there are two important factors which will not be in favour of having this site selected by the Trust as an industrial area in the city. They are : (1) this area lies directly in the prevailing wind direction over the city (see Figure 3) and (2) the waste matter which will be allowed to pass through Najafgarh Jhil out would pollute the waters of Jamuna, the main source of water supply to the city. On the other hand, the favourable factors are : (1) this area is separated by a part of the ridge which is about 70-feet high and also by the Roshanara Garden and (2) it is served by the railways and highways too. This grouping of the heavy industries into one locality will facilitate the cheap provision of public services such as water and electricity, railway sidings and drains than if they are scattered. Similarly, it will facilitate the arrangement of social welfare facilities like public transport for the workers, canteens, joint creches for children, sports facilities and medical services.

In this New Industrial Area we observe a tendency to build factories in commanding position along the main arterial road running to Najafgarh. This has resulted in the ribbon development of factories which is even more unsatisfactory than the ribbon development in housing.

In this connection several other industrial estates, like the one along Najafgarh Road, should be opened up. In the selection of sites, good rail and road communications, well drained land and consideration of the prevailing wind direction must be made the guiding factors. ■ the conditions of the factory area in Shaha-

data are improved, we think that it would turn to be one of the best suited factory areas except for sulphuric acid plants.

We propose that there should be some separate light industrial areas too. The wood industries lying in the midst of the residential areas along the M. M. Road in Paharganj (see zonal map) should be shifted to a suburban area located away from the residential neighbourhoods but closer to railways and highways. Similarly, the large number of tanneries located in Qarol Bagh and the soap and perfume industries in Subzi mandi which sometimes produce nauseating smells should be sited in areas lying on the lee side of housing considering the wind direction already shown.

We are of opinion that the opening up of planned industrial estates in the suburbs suggested by us would indirectly stimulate—as in American cities—the movement of the industrial population to the suburbs with a view to shortening the journey to work.¹ This is exactly what is required.

Another important problem which the planner in Delhi will have to solve is the problem of housing the small-scale producers who contribute a major portion of the production in the city. A greater part of the industrial prosperity of Delhi City depends on them. We find that these industries carrying on work in old houses, verandahs etc., affect undesirably the atmosphere and character of the residential neighbourhoods. But we observe that their work and business are mostly integrated with the life of the community. The small scale producers should be provided with small industrial estates at the outskirts or in streets of houses with workshop accommodation near the business areas of the city. For instance bakeries, dry cleaning works, radio repairing workshops should be housed in shopping centres. Motor-cycle repairing, wooden box manufacture which create some nuisance should be grouped together in another part of the shopping centre. In Old Delhi such groupings have grown up naturally and are already in existence.

How shall we house the industrial workers? We are in favour of separating the workers' homes from the industry but

1 E. M. Kitagawa & D. P. Bogue, *Suburbanization of Manufacturing Activity with Standard Metropolitan Areas*, (1955), pp. 127-28, and R. P. Cuzzort, *Suburbanization of Service Industries within Standard Metropolitan Areas*, (1953).

we feel that they should not be forced to travel long distances for their work. If they are compelled to do so as at present, this obviously affects their health and energy—which could be utilised for more production. Secondly, it means loss of time in travelling. To safeguard health, time and energy the housing should be arranged within walking distance of industries but not very far away from the city so that it would enable those residents to share the cultural opportunities provided by the city.

The present road pattern in Old Delhi is a survival of the bullock and buggy age for which it was entirely fitted. But today, as the automobile has taken their place a complete change of the road pattern is absolutely necessary. We feel that all the roads can be brought upto modern standards by widening, straightening and improving the general conditions with some well chalked out operations.

There are seven radial roads running into the city proper. Out of them four are national highways. All the traffic coming through them has resulted in tremendous overcrowding and traffic delay within the city. This is partly due to the defect of the present circulation pattern. This situation can be eased by smoothening out the existing pattern into a radial and circular pattern of distribution. In an earlier section we pointed out that there should be an inner circular road round the core of the city. Beyond this there should be another middle circular road running round, G. B.—Naya Bazar and Circular Roads when joined together could function as this circular road. This road should be extended beyond the railway-yards to join Hamilton Road at Mori Gate. (It can be further extended to Nicholson Road). This loop will link all the radial roads converging on the centre. If this is done the heavy traffic from the east going towards the industrial and wholesale markets in cloth and vegetables in Sadar Bazar and Subzimandi, can be directed to go through this middle loop without entering the main centre. A similar passage can be opened up for the traffic going to the east. The wholesale grain market should be shifted from the present site at Naya Bazar and relocated in another place not far away from the railway-yards.

The inner circular road should be connected with the mid-

dle circular road by retaining the existing streets. But they should be straightened and widened.

This reconstruction and widening of roads will involve a little demolition and opening out the local area. But it should be done.

Another essential part of the communication system is an outer circular road which should run round the whole built-up area. This road should begin from Mathura Road near Nizamuddin in the south and run upto Karnal Road in the north. It should be allowed to pass the pottery industrial area near Factory Road, Cantonment, and the New Industrial Area along Najafgarh Road. This step would certainly help relieve the present through traffic going from south to the Industrial Areas in the north-west and vice-versa.

There are two important traffic bottlenecks which need relief today. One is at the junction of Kutab Road, Sadar Bazar and the railway bridge road running to Chandni Chowk.¹ The second is at the Jamma Bridge. To relieve the congestion at the former site there are three alternative steps which can be taken. They are (1) there must be a subway for the up and down Kutab Road traffic; (2) the area at the present spot should be widened with a broad round about at the centre; or (3) the traffic running through Subzimandi Road to and from Connaught Place or Chandni Chowk should be diverted. We prefer the second to the other two. For the second bottleneck there is no other way to relieve the traffic except by broadening the Jamma Bridge and open it for two way traffic.

For several generations to come, Delhi's population will move on foot and on bicycles. They are the most economical and convenient means of movement. For this reason pedestrian way and the bicycle path are essential elements in the circulation system in Delhi. Hence proper attention should be paid for laying out special walks and cycle paths in the business centres as well as in the residential areas. Some of these features are already found in New Delhi.

¹ In the beginning of 1954 a Delhi daily (I think it was Times of India) went so far as to draw a cartoon of this spot with cycles, tongas, and lorries running one over the other and caption it "The Way to Heaven."

At present because of the lack of proper side-walk facilities most of the vehicular traffic in the busy areas are obstructed by the pedestrians. No exact measurements can be indicated with regard to the width of sidewalks. However, an example from America would be illuminating. Mr. Litchfield has suggested that for an average number of 200 person population housed in a 10 storey building having a 20 feet frontage, there should be about 20 feet wide side-walk, thus bringing in a reservation of about 2 square feet of side-walk area per person. Mr. Lawson Purdy, President of the Department of Taxes and Assessment in the city of New York, estimates 5 square feet of side-walk area per person calculating the pedestrian way according to the population density of the area served.¹ He thinks that the walks would be used by about one half of the building occupants at one time.

The present city of Delhi requires a good green belt. It is very necessary from the point of view of maintaining a healthy environment and of affording the city dwellers the opportunity of refreshing contact with the countryside. Ribbon development has spoiled the beauty of the existing green belt. The minimum depth of the green belt should be eight miles from the built-up areas of the city. The existing areas of the green belt described in the section under zoning should be preserved. Some of the land now owned by private land-holders should be bought and protected. But no purchase of land is necessary if it is guaranteed that the private land will remain unbuilt upon. The inhabitants both in the city and the rural countryside who are unaccustomed to the use of a green belt require education.

These in short are our suggestions to bring about a desirable change. They may not all be feasible at the present moment and they may have to be subjected to appropriate modifications if and when the question of their implementation will come up. But they have been put forth as some of the proper avenues for the redevelopment of the Metropolitan City of Delhi.

¹ *Regional Survey of New York and its Environs*, Vol. VI, pp. 81, 82.

APPENDICES

Appendix I

AVERAGE RAINFALL AT DELHI AND MEHRAULI

Rain-gauge Station 1	1880-90 2	1890-1900 3	1900-10 4	1910-20 5	1920-30 6
Delhi	29.9	26.1	23.51	23.72	22.19
Mehrauli	20.29	21.46	14.92	14.01	16.05

See Page 216 for Appendix II

Appendix III

DEATHS FROM VARIOUS CAUSES

Monthly averages

Year	Small- pox	Plague	Fever	Dysentery & Diarrhoea	Respiratory Diseases	Injuries & Suicide	All other causes	Total
1948	7	—	252	109	259	35	527	1189
1952								
Decem- ber	41	—	289	37	587	30	467	1501
1952	6	—	380	106	438	39	556	1525

Source : *Quarterly Digest—Economics & Statistics, Delhi State, (1953), Vol. II, No. 4*

Appendix II

LARGEST CITIES IN INDIA AND THEIR RANKS

City	1881		1901		1911		1921		1931		1941		1951	
	Popu- lation	Rank	Popu- lation	Rank	Popu- lation	Rank	Popu- lation	Rank	Popu- lation	Rank	Popu- lation	Rank	Popu- lation	Rank
Calcutta	744,249	2	921,380	1	1,013,143	1	1,046,300	2	1,168,771	1	2,108,881	1	2,548,877	2
Bombay	821,764	1	776,006	2	979,445	2	1,175,914	1	1,161,383	1	1,489,883	1	2,889,270	1
Madras	432,518	3	509,946	3	519,869	3	526,911	3	647,230	3	777,481	3	1,416,056	3
Hyderabad	415,039	4	448,486	4	500,623	4	404,187	4	486,894	4	739,159	4	1,085,722	4
Lahore	176,354	9	202,984	8	229,687	7	281,781	5	429,747	5	671,659	5	...	...
Ahmedabad	144,451	14	181,774	11	214,000	8	270,775	6	310,000	7	591,267	6	788,332	6
Delhi	189,648	8	206,534	7	229,144	6	248,259	7	347,539	6	521,849	7	914,790	11
New Delhi	...	...	...	...	...	...	...	...	...	...	92,733	60	276,314	21
Cawnpore	194,048	7	202,797	9	178,557	12	216,436	9	243,755	11	487,324	8	705,383	8
Amritsar	136,766	15	162,429	14	182,756	14	160,218	15	264,840	9	391,019	9	325,747	17
Lucknow	284,953	5	285,239	5	282,114	5	240,586	8	274,659	8	387,177	10	496,851	9
Howrah	116,806	22	157,594	15	179,006	11	195,301	12	224,873	13	379,282	11	483,630	12
Karachi	96,195	25	108,644	24	140,511	11	201,691	10	247,791	11	359,492	12	...	...
Nagpur	117,034	21	127,734	19	101,415	25	145,183	17	215,165	14	301,857	13	449,089	11
Agra	108,662	11	108,022	10	185,449	10	185,532	13	229,764	12	284,749	14	375,665	13
Benares	223,375	6	213,079	6	208,804	9	198,447	11	205,315	15	263,100	15	355,777	15

Source: Kingsley Davis, *The Population of India and Pakistan*, p. 132; *Census of India 1941*, Volume I, Part I, pp. 76-83; *Census of India 1951*, Paper No. 1, pp. 24-25 and G. S. Ghurye, "Cities of India," *Sociological Bulletin*, II, 1953.

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INDEX

A

- Administrative areas, 119.
- Administrative centre, 49.
- Afghan invasions, 10.
- Age-groups, 45, 47.
- Age-sex distribution, 44.
- Agriculture, 28.
- Air pollution, 209.
- Airports, 135.
- Airway system, 135.
- Ajmal Khan Park, 147.
- Akbar, 7.
- Ala-ud-din Khilji, 4.
- Altamash, 4.
- Anangpal, 3.
- Ancient monuments, 209.
- Aravalli Hills, 19.
- Areal planning, vii.
- Areas functional, administrative-cum-culture, 186; agriculture, 195; commuters', 194-195; heavy industrial, 183, 184, 185; light industrial, 183, 185; low income-group residential, 187-189; middle income-group residential, 189-190; retail business, 183, 208; state administrative, 196; upper income-group residential, 181; wholesale business, 182, 183; wholesale-cum-retail business, 181, 182.
- Aurangzeb, 8, 207.

B

- Baber, 6.
- Back, K., 202.
- Baines, J. A., 49-50n.
- Baker, Sir Herbert, 16.
- Banks, 65-67; and business, 66; credit institutions, 65; location, 67; services of, 66; and service areas, 67.
- Barber, 106.
- Batan Kaisara, 2.
- Bathing facilities, 149.
- Bernier, 31.
- Bharat natyam, 161, 167.
- Births and deaths, 47.
- Boardings, 75.
- Boating, 148, 149, 173.
- Boating tank, 145.
- Brick manufacture, 21, 22, 27.
- Brihasthala, 1.
- British the, 11, 53; Delhi of, 11; rule, 22.
- British India Improvement Trust Act, 82.

- Buildings, 9.
- Business district, 119, 120; traffic movement in, 125.
- Bus services, frequency of, 181-182.

C

- Camel, 116.
- Canal, 14.
- Capital, change of, 5, 6; of India, 104; national, 187; political, 7; transfer of, 15.
- Card games, 166.
- Caste-Hindus, 95.
- Caudhuri, 106, 107, 108.
- Chalk, 21.
- Chamars, 105-109; occupation of, 107; village, 106.
- Chandni Chowk, 8, 9, 111-112, 124, 125, 207; flow of traffic to, 126.
- Chaupati, 166.
- Chemical industries, 59.
- Child-marriage, 47.
- Child Marriage Restraint Act, 47n.
- "Children's Corners", 163; see also playgrounds; attendance, 162-164; space requirements, 206.
- Children's games, 172.
- Chinese pilgrims, 2.
- Chohan Delhi, 4.
- Christian Colony, 94 ff.
- Cinema-going, 168-171.
- Cinema theatres, 128, 140, 157-109, 168, 170, 203; location of, 160; seating capacity, 158, 206; seat prices, 159, 160, 170; in western countries, 158, 159.
- Circulation pattern, 212.
- Circular roads, 213, 219.
- Circus, 168.
- City, 5, 6, 7, 10, 11, 12, 15, 16, 18, 19, 27, 31, etc.; classification of, 49; as commercial centre, 32, 33; and congestion, 68, 69; as cultural centre, 31; founders of the, 1; as imperial capital, 32; and original inhabitants, 11; physical design of the, vii; and physical outline, 14, 19, 27; rank of, 34; and ridge, 20; transfer of jurisdiction of the, 12.
- City centre, 207, 208.
- City of Delhi defined, 30.
- City development, 87.

City economy, 109.
 City landscape, 203.
 City life, 197.
 City planners, 201.
 City population, 68.
 City reconstruction, 197.
 City removal, 5.
 Clandestine prostitution, 180.
 Clay, 21.
 Clay industries, 58-59.
 Clubs, 12, 16, 103, 151-154; activities of, 151, 171; community, 151, 153-154; cosmopolitan, 151; dramatic, 154.
 Commercial dancing, 161.
 Commercial recreation, 157, 160, 162.
 Commercial traffic, 111.
 Commuters' zone, 35.
 Cultural centre, 7.
 Concentration, viii.
 Congested areas, 40.
 Connaught Place, 128-129.
 Cotton mill industry, 53-57, 184.
 Cotton, import of, 56.
 Cul-de-sacs, 72, 95, 202, 203.
 Cultural institutions, 113.
 Cunningham, A., 2 n.
 Cycle paths, 213.

D

Daidala, 2.
 Dancing, 161-162, 167.
 Daulatabad, 5.
 Death-rate, 34.
 Delhi, name, 2.
 Delhi City Improvement Trust Act, 88, 89, 91; housing policy of, ■.
 Dhritarashtra, 1.
 Din Panah, 1, 10.
 Displaced persons, 17, 34, 35, 43, 82; colonies, 82-87; colonies and city expansion, 87.
 District of Delhi, 11.
 Dormitory houses, 84.
 Dramatic dances, 161, 167.
 Dudley Committee of England, 90.
 Dust storms, 24.

E

East India Company, 13.
 Eating houses, 175, 177.
 Ecological factors, 202.
 Ecological pattern, 80, 196.
 Ecological processes, viii, 103.
 Emigrants, 43.

Engineering works, 54.
 Epidemic, influenza, 33.
 European artists, 8.
 European quarters, 12.
 European residents, 14.
 Exchange banks, foreign, 65, 66.
 Exhibitions, 161.

F

Factories, 82.
 Famine, 5, 11.
 Fauna, 21, 22.
 Female labour, 51.
 Festinger, Leon, 202.
 Films, English, 168.
 Fire, 9, 91.
 Firozabad, 6, 7.
 Firoz Shah, 6.
 Fish supply, 27.
 Flats, 74, 190, 203, 204.
 Flora, 21, 22.
 Food and smoke industries, 60-61.
 Fruit supplies, 9.
 Functional distance, 202.

G

Gambling, 161.
 Games, 160, 172, 206.
 Garden Cities of Tomorrow, 197.
 Geographical factor, 87.
 Geology, 21.
 "Ghetto", 103.
 Ghias-ud-din Tughlak, 4.
 Gossip, 100, 101; function of, 100.
 Gossiping, 66.
 Gothic arches, 73.
 Greeks, invasion of, 2.
 Green belt, 145, 195, 198; preservation of, 214.
 Gujars, 92.

H

Handloom weaving, 62.
 Harijan, 108.
 Hastinapur, 1.
 "Hath milao", 171.
 Hauz Khaz, 4, 6.
 Hazrat Amir Khuzru, 4.
 Horse-racing, 161.
 Hoselitz, B. F. 49-50n.
 Hotels, 16, 191; location of, 175.
 Houses, 71, 72, 73, 75, 77, 84, 85, 92, 95, 192, 202, 204; definition of, 70; named, 96; physical planning of, 95, 96, 97, 99; and population, 69; space of, 204;

state-owned, 76; types of 71, 78-80, 83.
 House-gardening, 28, 29.
 Household, size of, 198 m.
 Houseless persons, 77.
 Housing, 68-100; density, 196; and ecological pattern, 80; and the industrial workers, 211; layout, 101; planned, 73, 82; spacing of, 202; unplanned, 70, 71.
 Howard, Ebenezer, 197.
 Human ecology, vii.
 Humayun, 7.
 Humidity, 25.
 Hwan Tshang, 2n.

I

Ibn Battuta, 5.
 Ice industries, 61.
 Immigrants, 34, 41, 42, 43, 207; and occupation, 42.
 Indraprastha, 1, 2, 6, 7, 11.
 Industrial centre, 49.
 Industrial estates, 210.
 Industrial nucleus, 53.
 Industrial structure, 209.
 Industrial towns, 115, 185.
 Industrial workers, 84, 65, 185.
 Industries, 48, 51, 53, 54, 55, 59, 62, 64, 138, 184, 185, 210, 211; and housing, 212; indigenous, 53, 56, 62; location of, 50, 51, 53; in residential neighbourhoods, 201, 211; and smoke, 209; suburbanizing of, 200; and workers, 63-64.
 Invasion, viii, 105.
 Iron Pillar, 2.
 Ivory-carving, 53.

J

Jahangir, 7.
 Jahanpanah, 5.
 Jalal-ud-din Khilji, 4.
 Jama Masjid, 8.
 Jamuna canal, 6.
 Jamuna river, 20, 27, 143.
 Journey to work, 138, 137.

K

Kali Bari, 97, 154.
 Kandavaprashta, 1.
 Kaolin, 27.
 Kathakali, 161, 167.
 Khurram, see Shahajahan.
 Kumbhakarna, effigy of, 178.
 Kuper, Mr. Leo, 202.

Kurukshetra, 1.
 Kuvrial, 201.

L

Lal Kot, 3, 4.
 Leather industries, 60.
 Leather tanning, 104.
 Leisure and recreation, 142 ff.; conditioning factors of, 143; and transport, 143.
 Leisure-time activities, 135ff.
 Litchfield, Mr. 214.
 Lodging houses, 209.
 Lohar, 106.
 Lutyens, Sir Edwin, 18.

M

Macedonian invasion, 2.
 Mahabharata, the, 1, 174.
 Marathas, 10, 11.
 Marital condition, 46, 47.
 Marriage, postponement of, 47.
 Mehrauli, a town, 3.
 Merton, Prof. R. K., 202.
 Metal manufacture, 57-58.
 Metcalfe House, 73.
 Metcalfe, Thomas, 12.
 Metropolitan district of Delhi, 31, 114.
 Mikrorgia, 201.
 Milk supply, 28.
 Moguls, the Delhi of the, 3, 21.
 Mohammedan Empire, capital of, 3.
 Mohammed-bin-Tughlak, 5.
 Mohammed of Ghazni, 3.
 Mohammed of Ghor, 3.
 Mongol invasions, 4.
 Municipal Act, 15.
 Municipal town of Delhi, 7.
 Mutiny 1857, 9, 12, 32.

N

Nadir Shah, 10, 207.
 Nai, 106; see also barber.
 Natal, National Housing and Planning Commission, 90.
 National highways, 212.
 Native commerce, 49.
 Neighbourliness, 102-103.
 Neighbours, 97, 102; borrowing, 98; and ceremonies, 99; children, 99, 100.
 Neighbourhood, institutions, 94, 200-201, 205, 206; amenities, 97; attachment, 103n.; and immigrants, 94; planning, 202; rela-

tions, 93-103, 106; Russian, 201.
Nehru, Prime Minister, 92.
New Industrial Area, 51, 53, 184,
210.
Nizam-ud-din, 4, 5.
Non-schedule banks, 66.
Nuclear family, 107.

O

Occupations, 48, 49, 50.
Open spaces, 74, 43, 144; internal,
144.

P

Palladian classic styles, 17.
Pandavas, 1, 7.
Pandava brothers, 1, 2.
Parking spaces, 128.
Parks, 145, 147, 156, 157, 187; area
of, 155, 198; in the west, 158; and
population, 155, 156; require-
ments, 157; and Soviet Consti-
tution, 158.
Partition of India, 17, 55.
Pathans, Delhi of the, 3.
Pavements, 120, 128.
Pedestrian obstructions, 214.
Persians, 10.
Physical distance, 202.
Picnic grounds, 149.
Pietra dura style, 8.
Plague, 32.
Planning of industries, 209.
Playgrounds, 143, 149, 165; child-
ren's 150, 162, 200, 201, 206; lack
of, 164; materials, 163, 206; mu-
nicipal, 150.
Population, III ff.; 10, 12, 30, 32,
33, 68; of business district, 127;
community, 125; density, 35-41,
68; estimates, 197; genesis of,
31 ff.; growth, 33; and houses,
69; immigrants, 33, 177; and
livelihood, 199; mobile, 33; of
Moscow, 197; movement, 130,
213; natural growth, 68; over-
spill, 199; and passport system,
198; and railways, 32; and space
expansion 68.
Pottery factory, 51, 185, 210.
Prasthas or plains, 1.
Prithivi Raj, 8.
Prostitutes, 177, 178; areas of, 179;
and prices, 179, 180.
Prostitution, 178.
Ptolemy, 2.
Purana Kila, 1, 16.
Purdy, Mr. Lawson, 214.

Q

Qarol Bagh, 104.
Quartzite rock, 27.
Queen's Garden, 145-146.
Qutab-ud-din Aibak, 3.
Qutab Minar, 3, 4, 5, 7, 10, 11, 149.

R

Racing, 173; see also horse-rac-
ing.
Railway, 132, 135; and industries,
13; development, 13; transpor-
tation, 51; travel, 141.
Railway routes, 115.
Rainfall, 8n, 21, 23-24.
Raipithora, 3.
Raja Dilu or Dhilu, 2, 3.
Rajut architecture, 3.
Rajput city, 3.
Rajputs, Delhi of the, 2, 3.
Ram Lila Day, 178.
Ravana, effigy of, 178.
Rebellion 1857, 12.
Recreation, VII ff., 115; facilities
for, 143 ff.; and occupation, 142;
in planned and unplanned
areas, 143.
Recreational activities, 172.
Recreational agencies, 150.
Redfield, R. 49-50n.
"Regbars", 102, 108.
Regharpura, 105; castes at, 105.
Regional bus services, 126.
Regional highways, 114, 115.
Regional traffic, 123, 131, 135.
Regional travel, 141.
Rehousing schemes, 89, 90, 200.
Reimer, Svend, 204.
Religious discourses, 174.
Respiratory diseases, 109.
Restaurants, 209; dine-and-dance,
161, 167.
Rest houses, 177.
Retail business centre, 16.
Ribbon development, 210, 214.
Ridge, 21, 104.
Rivers, 19.
Road system, 110-114, 115.
Roads, features of, 113-114; pat-
tern, 212; and the ridge, 112.
Roshanara Garden, 146.

S

Salimgarh, 7.
Satellite towns, 17, 30, 31, 34, 43,
44.
Sayyids and Lodis, 6.

Schachter, Stanley, 202.
 Segregation, viii, 201.
 Sexes, disproportion of, 173.
 Sex-distribution, 46.
 Sex proportion, 43.
 Shahajahan, 7, 8, 13, 207; Moghul city planner, 7; and gardens, 7.
 Shahajahanabad, 6, 10, 11, 32.
 Shacks, 77, 80, 87; occupants of, 77.
 Shirgarh, 7.
 Shopping area, 139.
 Shopping centres, 191.
 Sidewalks, 214; see also pavements.
 Singer, M. B. 49-40n.
 Siri, 4.
 Slave dynasty, 4.
 Slums, 87, 92.
 Slum-clearance, problem, 87, 88, 89, 91, 92; schemes, 93.
 Slum-dwellers, 90.
 Small-scale industries, 211.
 Social dancing, 161.
 Sociability, 93.
 Spatial areas, 198.
 Spatial expansion, 197.
 Spatial planning, 137.
 Sport watching, 172.
 Steel industries, 51.
 Storeyed buildings, 205.
 Sub-neighbourhood, 201.
 Suburbs, 200.
 Suburban development, 93.
 Succession, viii.
 Super-neighbourhood, 201.

T

Tanneries, 211.
 Tea drinking, 171.
 Temperature, 24.
 Temples, 174.
 "Terrace houses", 203.
 Textile industries, 51.
 Theatre audience, 169.
 Theatre-going, 167.
 Theatre-groups, 167.
 Tilaprashta, 2n.
 Timur the Lame, 6.
 Topographical features, 196.
 Toynebee, Arnold, 15 n.
 Towns, neighbouring, 114.
 Tourists and travellers, 209.
 Trade and caravans, 10.

Traffic, 119, 120, 123, 128, 131; and administrative area, 120, 121; bottlenecks, 213; and business district, 121; commercial, 122; concentration, 124; counts, 130; flow, 123, 129; origin and nature, 119, 121; peak hour, 125; termini, 132.
 Traffic and transport, 110 ff.
 Traffic circulation, 203.
 Travel, cost of, 138; purpose of, 115, 116, 136, 139, 140; time, 137.
 Tughlakabad, 4, 5, 19.
 Tughlak dynasty, 4.

U

United Provinces Town Improvement Act, 88.
 University, 193.
 Untouchables, 102, 108.

V

Vegetation, 21.
 Vehicles, types, 63, 115, 116, 117, 118, 119; indigenous types, 117.
 Vice, asylums of, 177.
 Visits, 166, 167.

W

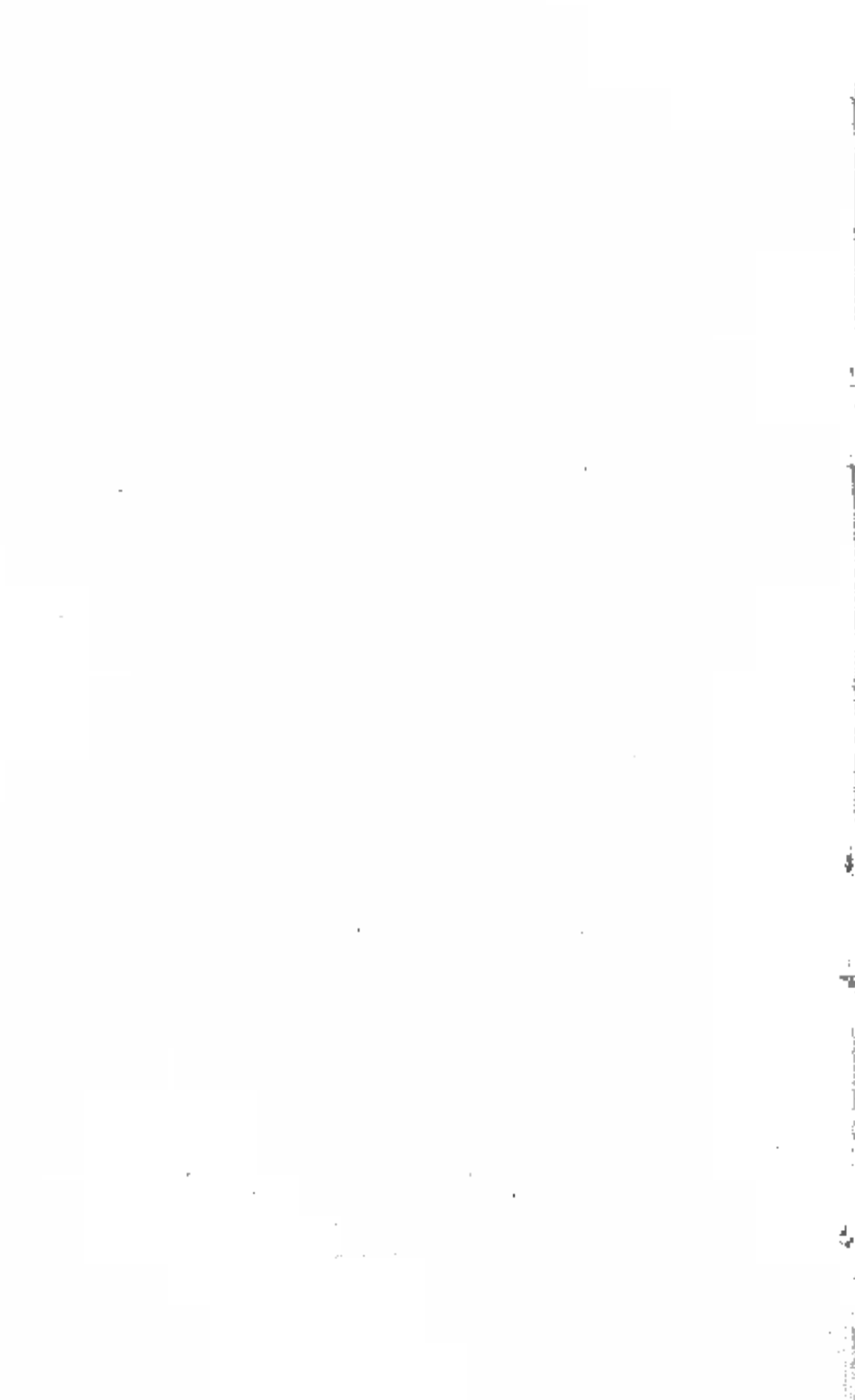
Walking, 174.
 Water-front parks, 148.
 "White slaves", 178.
 Wind, 25, 26.
 Wind direction, 211.
 Women and gossip, 99.
 Wood industries, 61-62, 211.

Y

Y.M.C.A., the, 154, 155.
 Y.W.C.A., the, 154, 155.
 Yudhisthira, 2.

Z

Zones, 181, 198; administrative, 186; administrative-cum-cultural, 181; business-cum-commercial, 181-183; commuters' 181, 183-185; cultural, 181, 182-183; Dormitory, see also commuters' zone; Green Belt, 181; industrial, 181, 183-186; residential, 181, 187.
 Zoning, 181.



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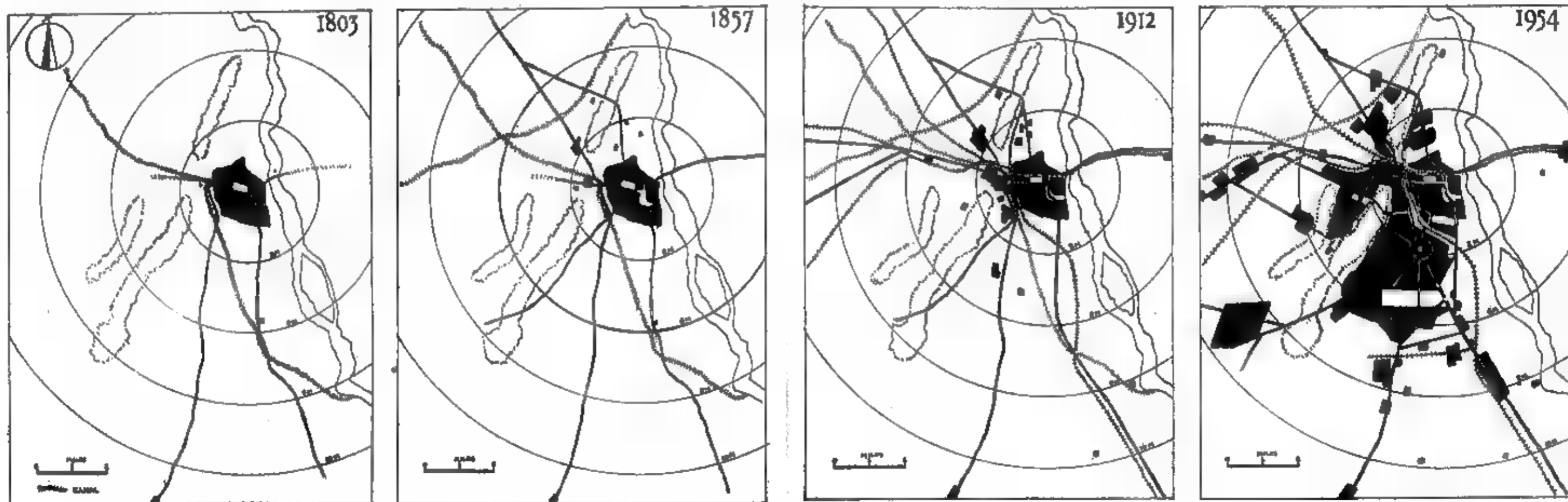
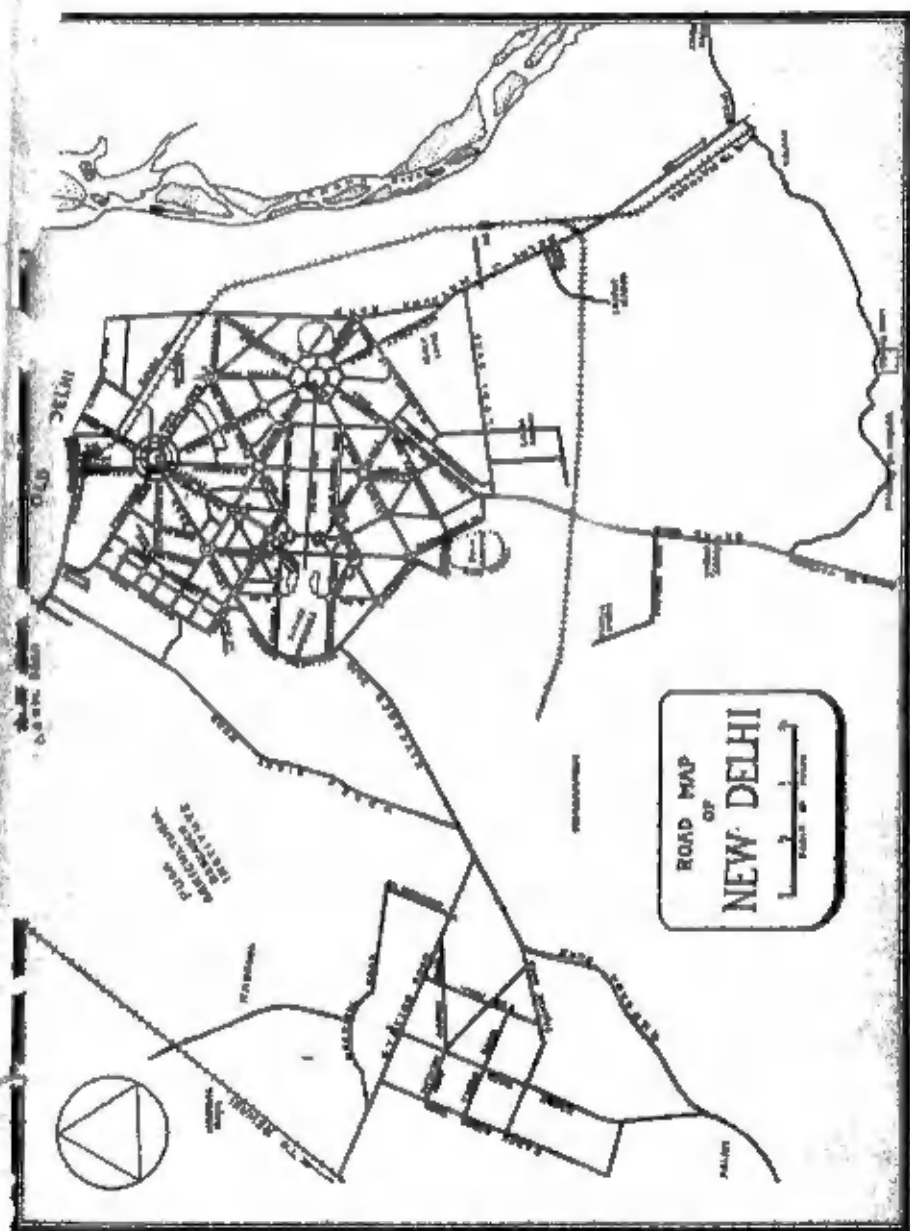


Figure 1



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